

PS-X555ES

SERVICE MANUAL

US Model
Canadian Model
AEP Model



SPECIFICATIONS

Turntable


Platter	32 cm (12 ⁵ / ₈ in.), aluminum-alloy diecast
Motor	Linear torque BSL (brushless and slotless) motor
Drive system	Direct drive
Control system	Quartz lock control, magnedisc servo control system
Speed	33 ¹ / ₃ rpm, 45 rpm
Starting characteristics	Comes to nominal speed within a 1/2 revolution (33 ¹ / ₃ rpm)
Wow and flutter	0.015% (WRMS) *, 0.02% (WRMS) ±0.03% (DIN)
Signal-to-noise ratio	78 dB (DIN-B)
Load characteristics	0% up to 100 g stylus force (at lead-in groove of a record)
Speed deviation	Within ±0.0003%
Automatic system	Lead-in, return, reject, repeat, arm up/down, record size selection

Tonearm


Type	Electronic linear tracking tonearm
Pivot-to-stylus length	130 mm (5 ¹ / ₈ in.)
Overall arm length	212.5 mm (8 ³ / ₈ in.)
Tracking error	±0.07°
Stylus force adjustment range	0.5 – 2.5 g
Cartridge shell weight	7.2 g
Cartridge weight range (including cartridge shell)	10 – 15 g 14.5 – 19.5 g (with extra weight)

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.



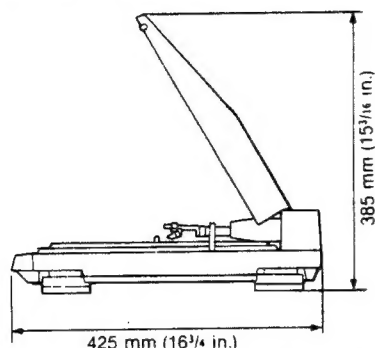
STEREO TURNTABLE SYSTEM
SONY®

AUD

General

Power requirements	AEP, G-AEP model: 220 V ac, 50/60 Hz US, Canadian model: 120 V ac, 60 Hz
Power consumption	23 W
Dimensions	Approx. 430 x 105 x 425 mm (w/h/d) (17 x 4 ¹ / ₈ x 16 ³ / ₄ in.) including projecting parts and controls

With the dust cover opened



Weight

Approx. 7.4 kg (16 lbs 5 oz), net
Approx. 9 kg (19 lbs 14 oz), in shipping carton

FEATURES

Linear tracking tonearm

A linear tracking tonearm is designed to duplicate the movement of the head which cuts the record master.

Compared with a pivoted tonearm, a linear tracking arm has a very small tracking error (which means greatly reduced harmonic distortion) and almost no pressure on the inside wall of the groove (which means improved tracking ability and channel separation).

Biotracer electronic tonearm

The horizontal and vertical movement of the tonearm is monitored by the Biotracer's own sensors, and this information is transmitted to the tonearm by the tonearm's own linear motors to suppress resonance at low frequencies and to obtain the maximum signal-to-noise ratio. With the microcomputer incorporated, the tonearm movement, up/down or forward/backward, is accurate and smooth.

Front panel operation with the dust cover closed

The ARM TRANSPORT buttons allow you to move the tonearm easily over the desired point of the record with the dust cover closed. Start/stop of the record play and tonearm up/down can also be controlled using the buttons on the front panel.

Electronic stylus force adjustment

As the stylus force is adjusted by the control on the front panel and digitally read out, it can be easily adjusted even during record play.

Automatic record size selection

The record size is automatically set by a photo sensor system. If no record is on the turntable, the tonearm will not descend but will automatically return to the arm rest.

Muting system

A muting system activates when the tonearm is lifted and is deactivated after the tonearm lowers onto a record so there is no need to turn the amplifier volume down every time a stylus is placed on a record.

Quartz lock and magnedisc servo system

The turntable maintains an accurate and drift-free speed by referring to a frequency generated by a very stable quartz oscillator, and with aid of a speed monitoring system which utilizes a magnetic pick-up head and a pulse signal derived from a magnetic coating at the edge of the platter.

Linear torque BSL motor

Direct drive system with Sony's unique BSL (brushless and slotless) motor which has an extremely low noise level and whose smoothness virtually eliminates wow and flutter. Its high torque assures a quick start to 33 ¹/₃ rpm after only a half revolution.

Synchronized operation with the Sony cassette decks

When the tonearm lowers onto the lead-in groove of a record, the cassette deck stand-by mode is released and the record mode assumed. When play finishes, the cassette deck is automatically set first in the record muting mode, then in the pause mode. This synchronized operation is possible with Sony cassette decks equipped with a four-pin remote control jack which is connected with the Sony RM-65 synchro remote control unit.

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

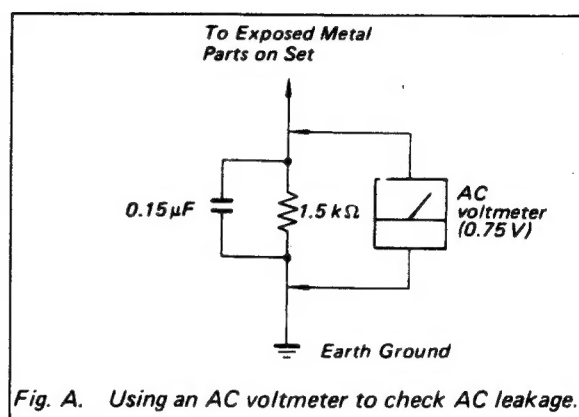
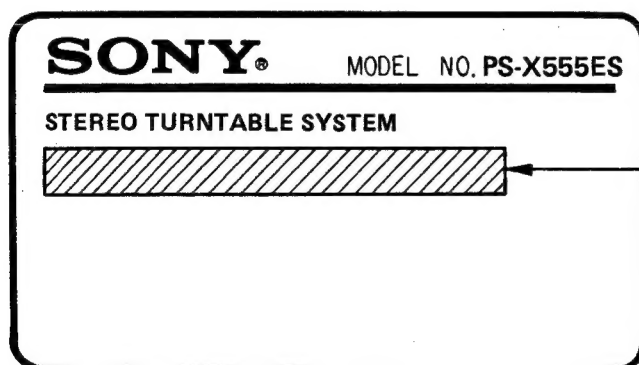


Fig. A. Using an AC voltmeter to check AC leakage.

MODEL IDENTIFICATION

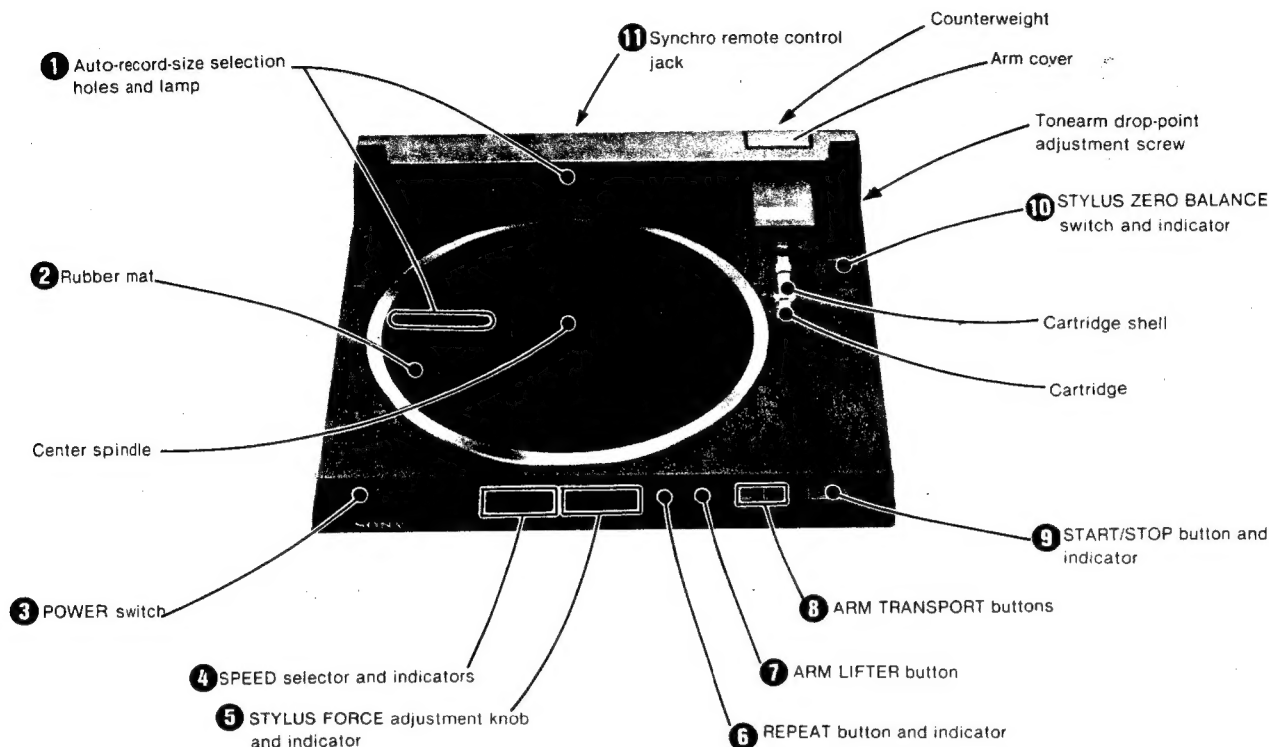
— Specification Label —



US, Canadian model: 120V 60Hz 23W
AEP, G-AEP model: 220V 50/60Hz 23W
(G-AEP model is W-GERMANY model)

LOCATION AND FUNCTION OF CONTROLS

The photo below shows the assembled turntable.



1 Auto-record-size selection holes and lamp

Record size is automatically selected by a beam transmitted from a lamp through the holes on the rubber mat and the platter to the photo detectors underneath the platter. When no record is on the platter, the tonearm will not lower onto the turntable.

2 Rubber mat

Place the rubber mat so that the holes for auto-record-size selection on the rubber mat and on the platter are matched correctly.

3 POWER switch

Press to turn on the turntable. To turn the turntable off, press it again.

4 SPEED selector and indicators

Selects the record speed. When the POWER switch is turned on, the speed is always 33 $\frac{1}{3}$ rpm and the indicator on the right illuminates. When the selector is pressed, 45 rpm is selected and the indicator on the left illuminates.

5 STYLUS FORCE adjustment knob and indicator

Turn this knob to set the appropriate stylus force for the cartridge you use. The stylus force can be changed during record play if so desired. The stylus force is indicated in 0.1 gram steps.

6 REPEAT button and indicator

Press this button to repeat play. The indicator illuminates and repeat play continues until this button is pressed to stop it. If the START/STOP button is pressed during repeat play, the tonearm returns to the arm rest and the turntable stops rotating.

7 ARM LIFTER button

This button lifts and lowers the tonearm.

When the tonearm is on the arm rest, it cannot be lifted up with this button.

8 ARM TRANSPORT buttons

To move the tonearm inwards, press the < button. To move it outwards, press the > button. The tonearm is raised automatically and continues to move while the button is depressed. The tonearm will stop when the button is released. For fine adjustment of the tonearm drop-point over a record, press and immediately release the appropriate button. This button is useful for beginning a record partway through, or for skipping to another selection.

9 START/STOP button and indicator

Press this button to start the record playing, and the indicator illuminates. To stop during play, press it again.

10 STYLUS ZERO BALANCE switch and indicator

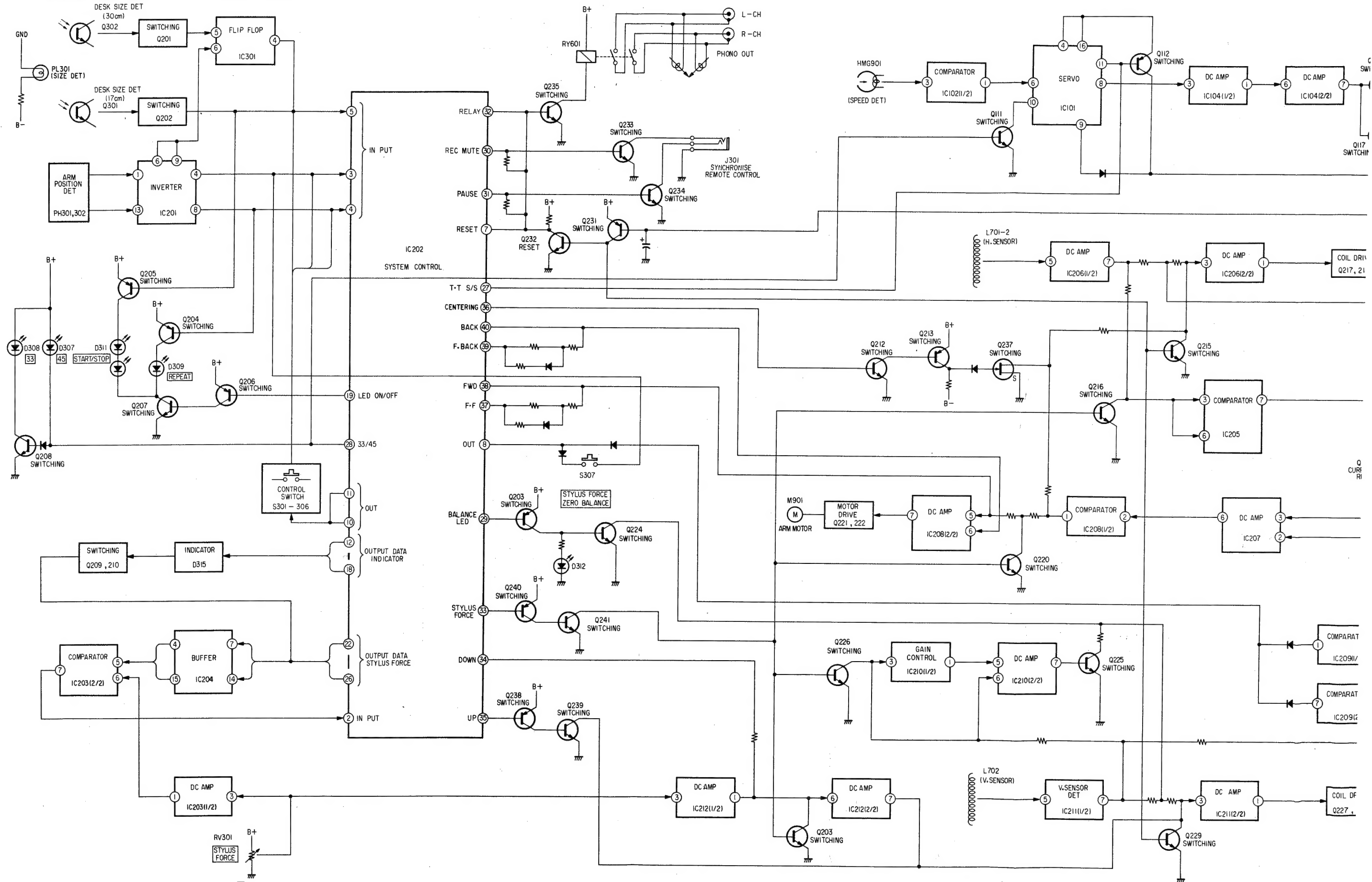
Press this switch before adjusting the tonearm balance.

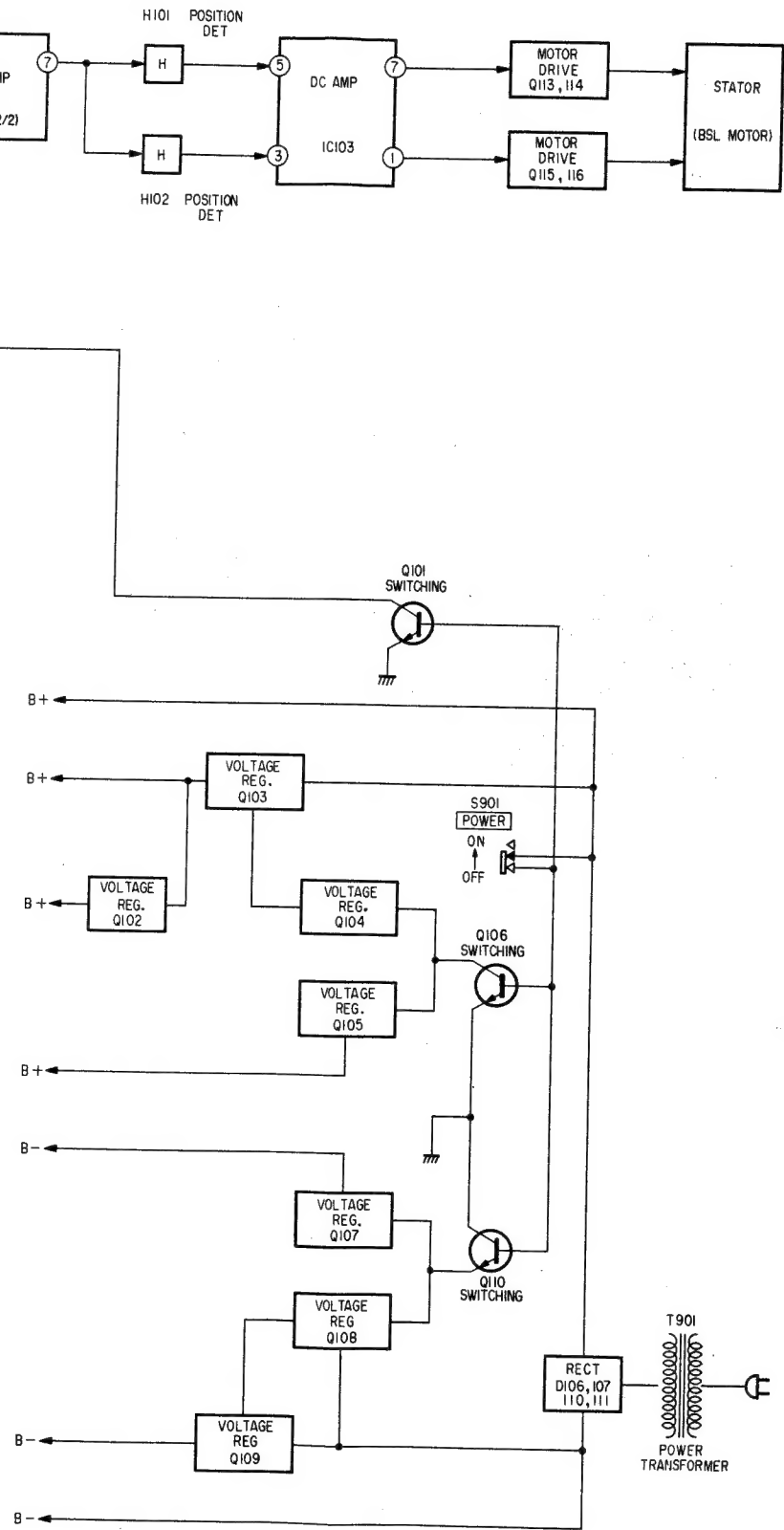
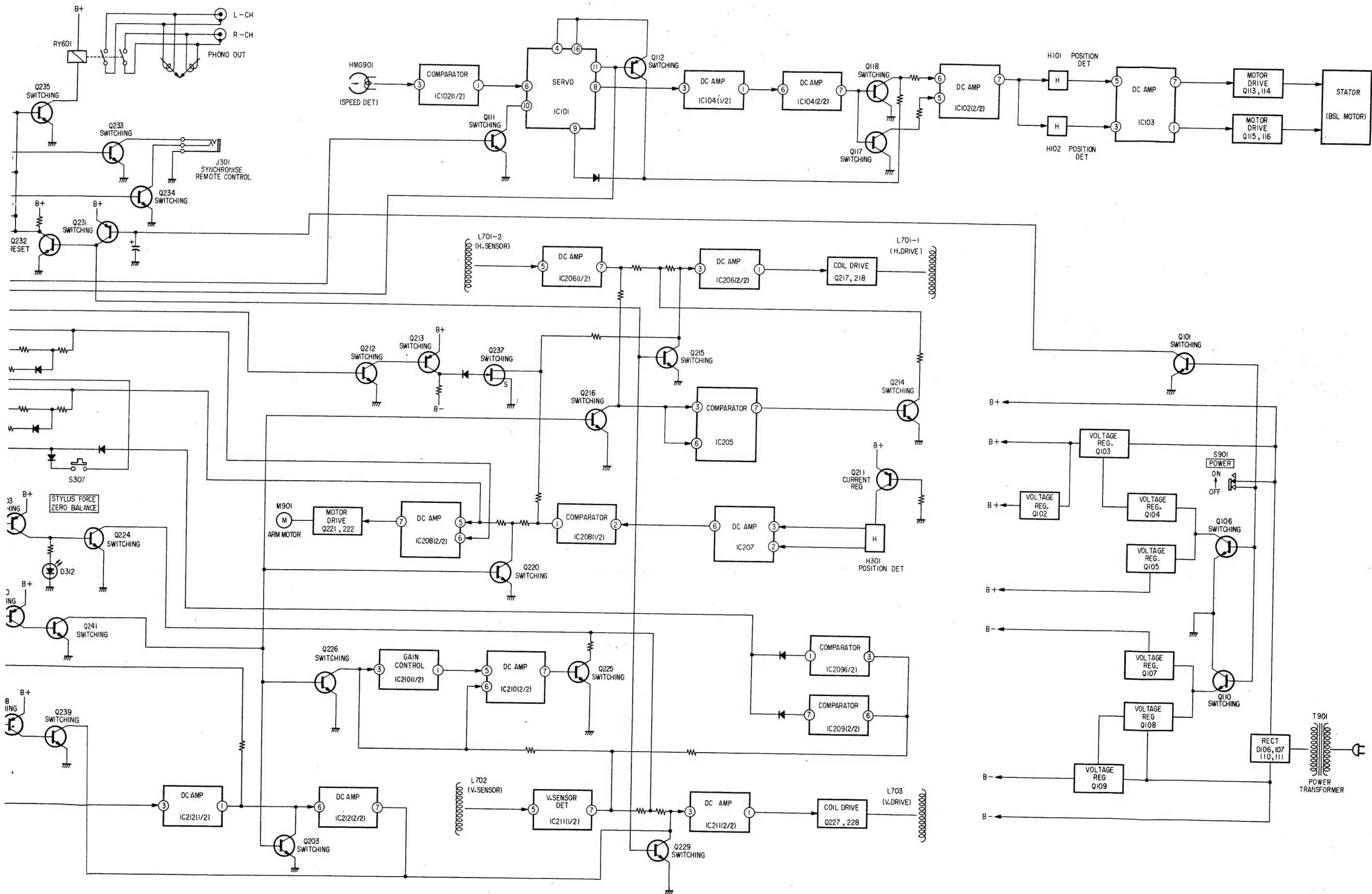
11 Synchro remote control jack (rear)

Synchronized recording from disc to tape is possible on specified Sony cassette decks by using the optional RM-65 synchro remote control unit.

SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM





SECTION 2
CIRCUIT DESCRIPTION

1. Biotracer Structure

The biotracer structure is shown in Figure 1. The drive coil drives the tonearm, and a coil with the same type of structure performs detection. These drive coils are paired with sensor coils and are arranged for horizontal and vertical directions.

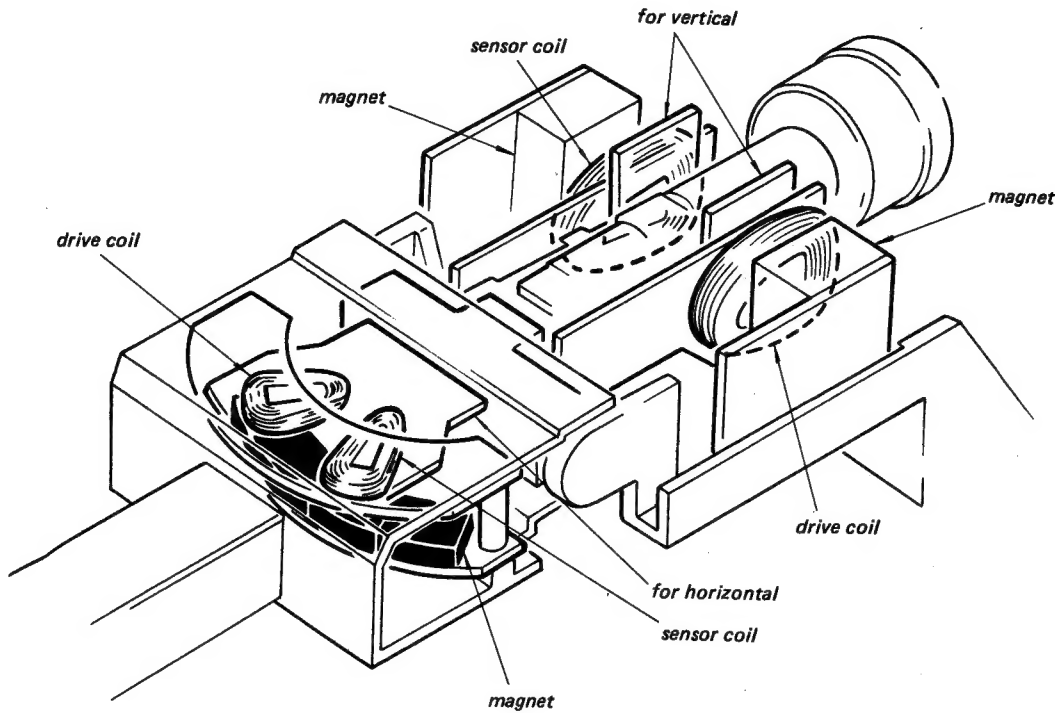


Fig. 1

2. Biotracer Operation Theory

2-1. Drive Coil

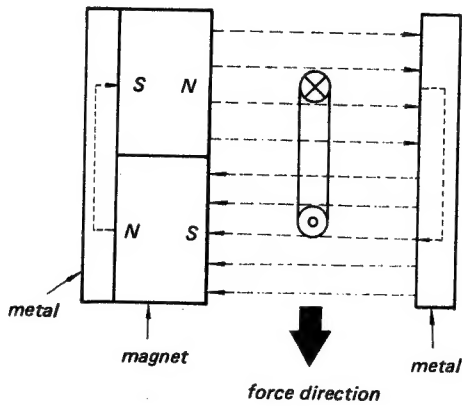


Fig. 2

The coil is placed in the magnetic field of the magnet, and when current flows as shown in Figure 2, force is generated in the direction of the arrow, according to Fleming's left-hand rule. This force moves the tonearm in the horizontal or vertical direction.

2-2. Sensor Coil

The sensor coil has exactly the same structure as the drive coil.

The sensor coil detects tonearm movement, and checks in which direction the tonearm moves by induction current generated when the coil or magnet moves. (Fleming's right-hand rule) This is shown in the simple diagram below.

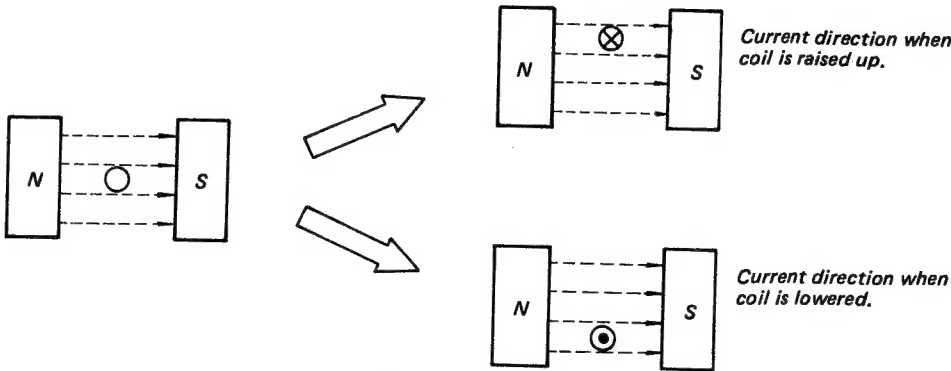


Fig. 3

2-3. MFB (Motional Feed Back)

MFB is a servo circuit composed of a sensor coil which detects change, a drive coil which generates force and a DC amp which amplifies the detected signal. (Refer to Figure 4.)

If MFB servo gain is large, tonearm low range resonance, etc. is suppressed and response improves, but in the vertical direction, when record warp is large, the stylus cannot follow and the record grooves cannot be traced.

Also, it cannot follow at fast portions such as the END groove and lead-in groove in the horizontal direction.

So, the servo amp gain is lowered when movement is larger at such times.

A window comparator circuit is employed as a method to detect change over a certain level.

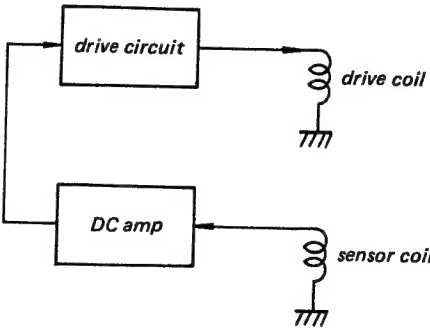


Fig. 4

2-4. Window Comparator

Figure 5 is the basic schematic of the window comparator.

Output Eo appears when input voltage (Ei) is higher than Eh or lower than E1. When input voltage is $E_h > E_i > E_1$, output does not appear.

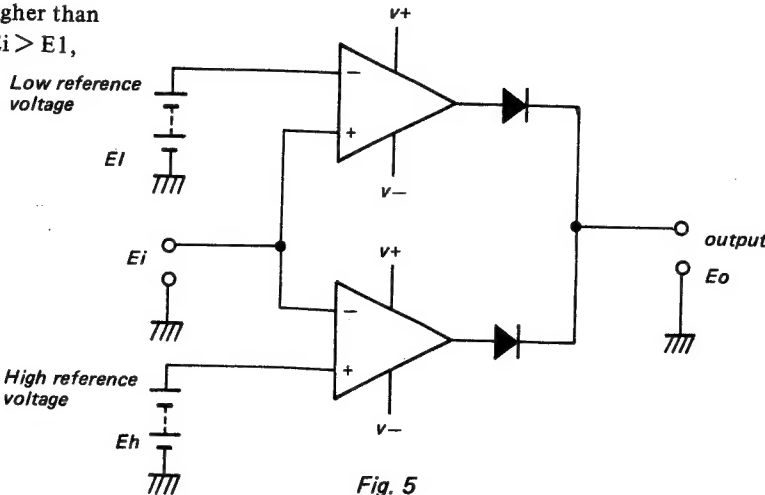
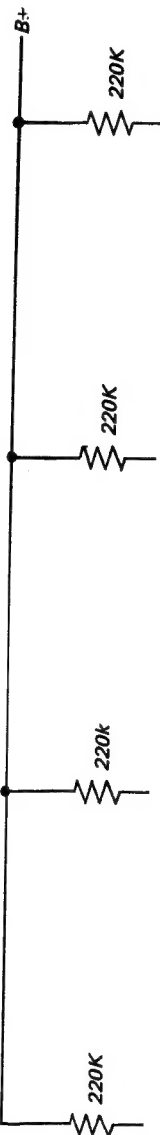


Fig. 5

3. Circuit Op

3-1. Key Inp
Figure 6 sl
are key input



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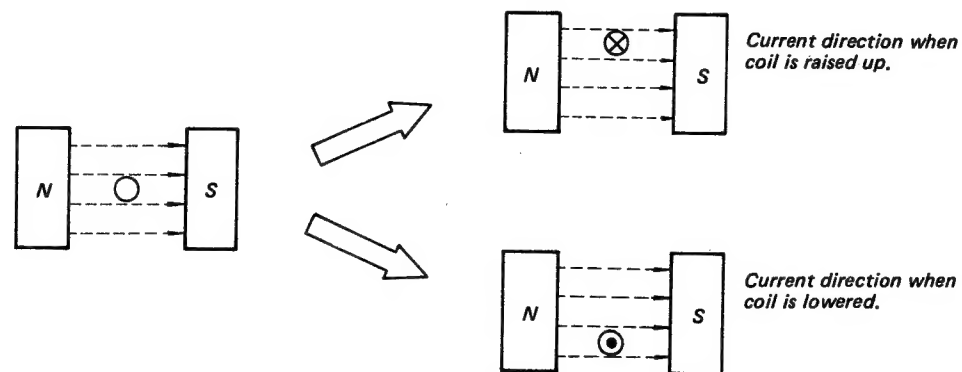


Fig. 3

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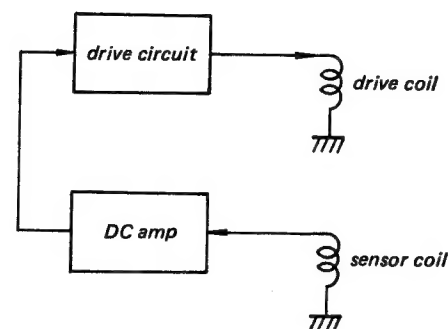


Fig. 4

2-4. Window Comparator

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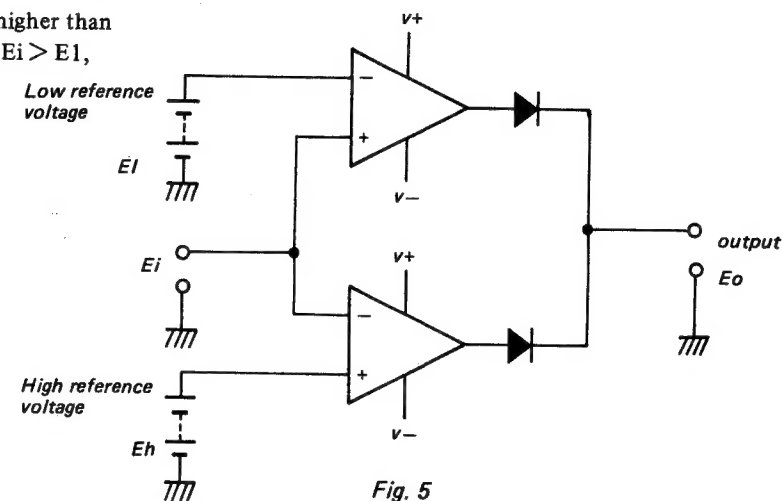


Fig. 5

3. Circuit Operation

3-1. Key Input Circuit

Figure 6 shows part of the key input circuit. ② - ⑤ are input pins. When pins ② - ⑤ are made low in order, the microcomputer program controls the state depending on the state of pins ⑧ - ⑪.

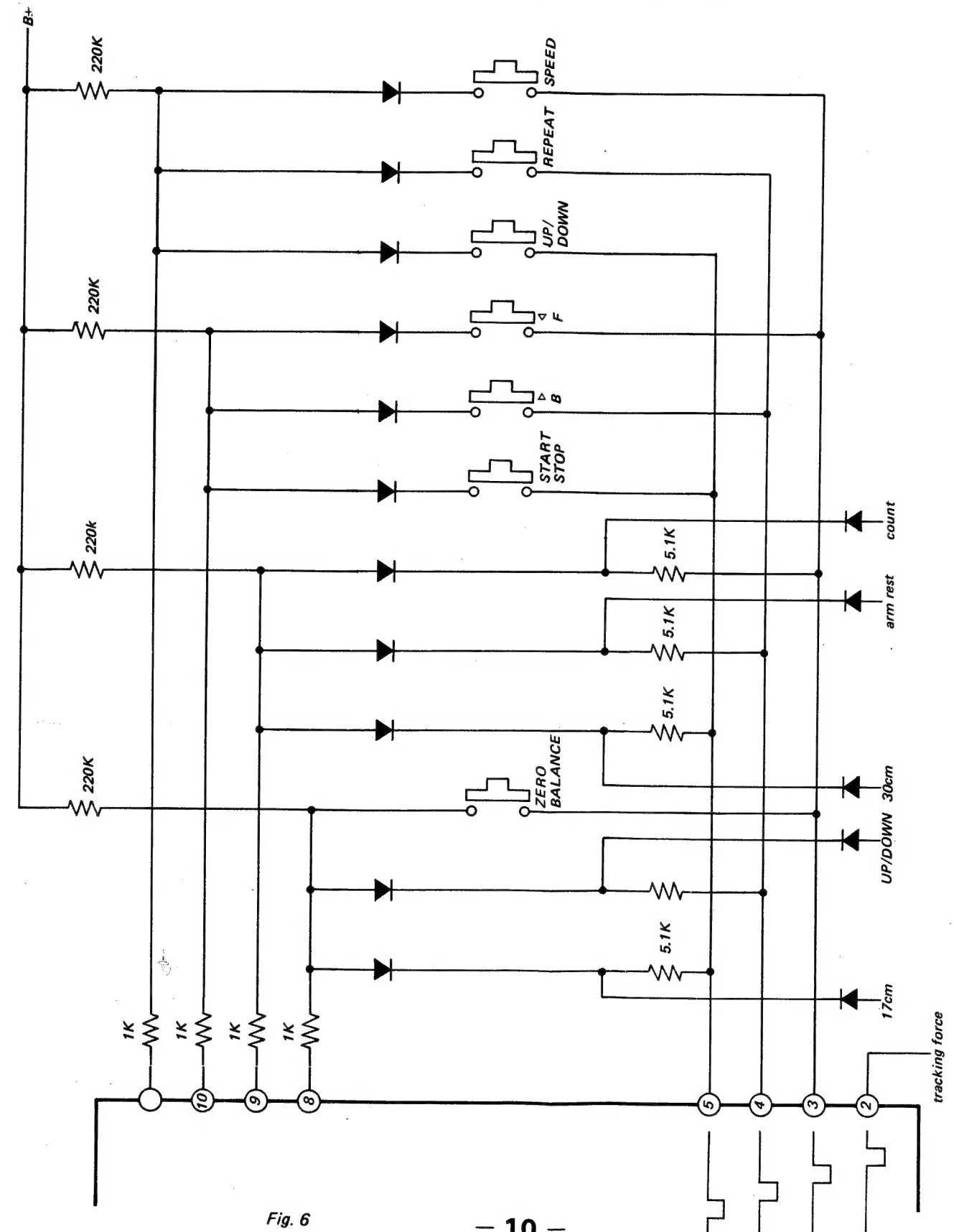


Fig. 6

When pin (5) is low, the four inputs are identified as shown in the figure 7. When no record is set, D204, 203 are on, and D208, 209 do not go on, so pins (8) and (9) are high. When a 30 cm record is set, D203, 204 go off, D208, D209 go on, and pins (8) and (9) both go low.

This identifies that it is a 30cm record. Input detection is performed in this way. Detection of the state is done by making pins (2) – (5) low in order, and observing the states of pins (8) – (11) at that time. (Refer to Figure 7.)

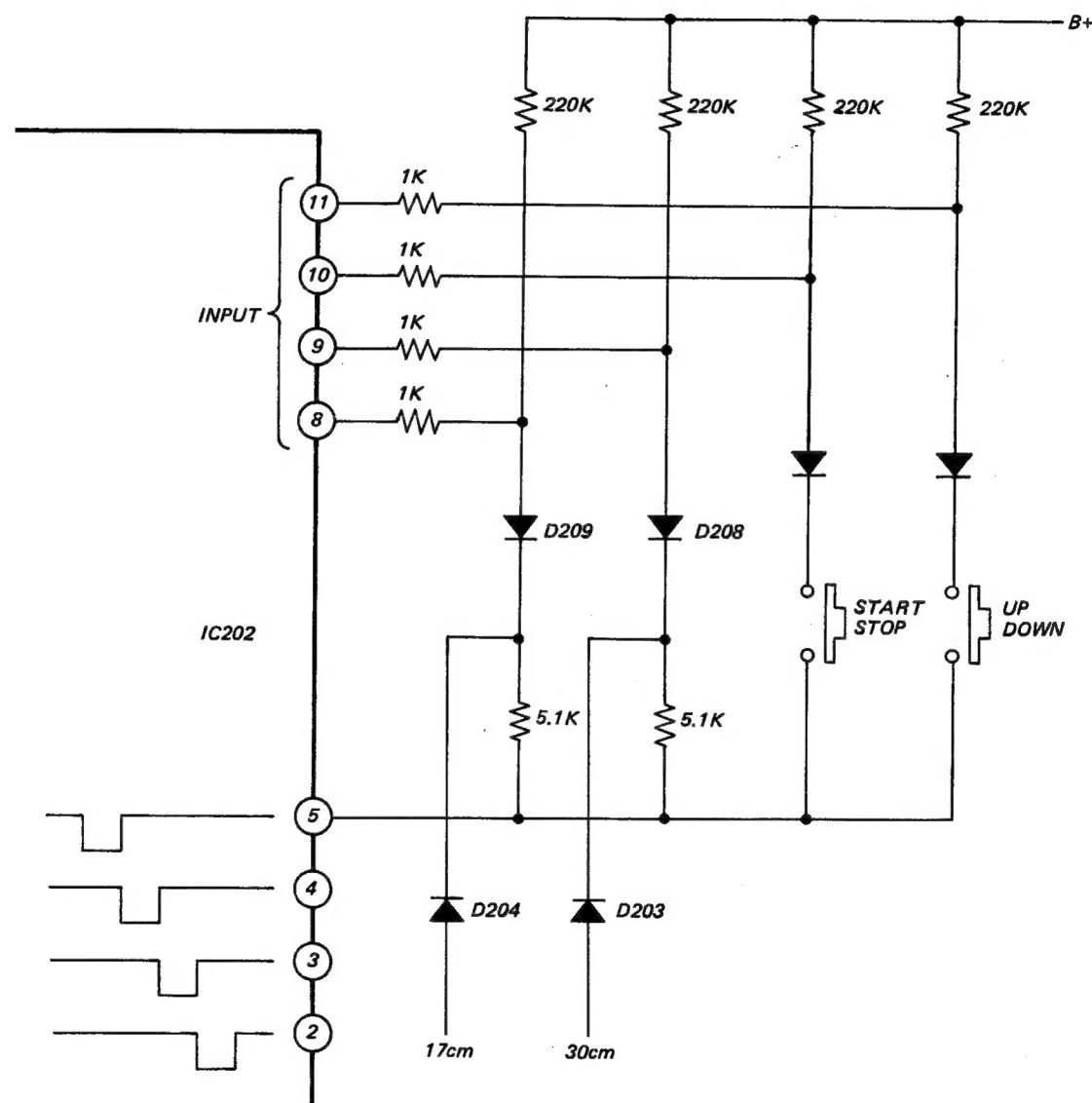


Fig. 7

3-2. Horizontal Detection Circuit

Figure 8 shows part of the horizontal detection circuit. The signal detected from the sensor is amplified at IC206 (1/2). This signal is applied to IC206 (2/2), applied to Q217, 218 drive circuit, current flows to the horizontal drive coil and the tonearm moves.

The signal amplified at IC206 (1/2) is also applied to the IC205 window comparator, which operates when movement is large such as at the record lead-in groove, etc.

This window comparator turns Q214 on, and lowers servo circuit loop gain in order to lower the level of the signal from IC206 (1/2) and improve stylus following capability.

The circuit in Figure 8 operates so that the stylus traces the center of the record groove.

3-3. Arm Motor Rotation

The arm motor is rotated so that the arm follows the movement of the stylus during play. This position detection is performed using a Hall element.

The voltage generated at the Hall element is proportionate to the current flowing to the Hall element and magnetic field. As shown in Figure 10, the Hall element is between the N and S poles of the magnet, and voltage is generated at the Hall element depending on the N and S pole movement.

This voltage is amplified at IC207 and applied to IC208 (1/2). This output is applied to the horizontal servo circuit and arm motor drive circuit, and when it goes above a certain voltage (approx. 1.8V) the arm motor rotates and moves the arm.

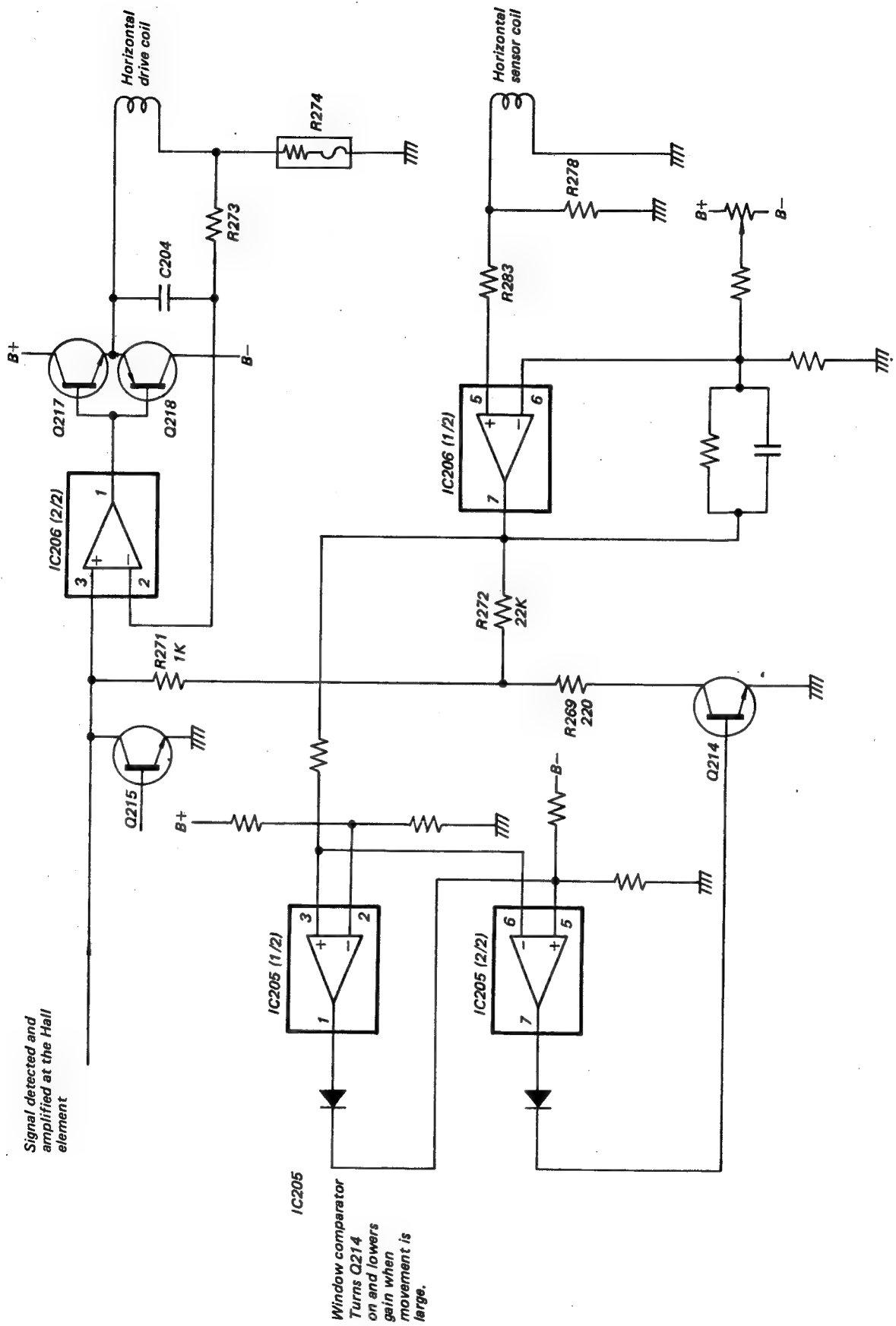


Fig. 8

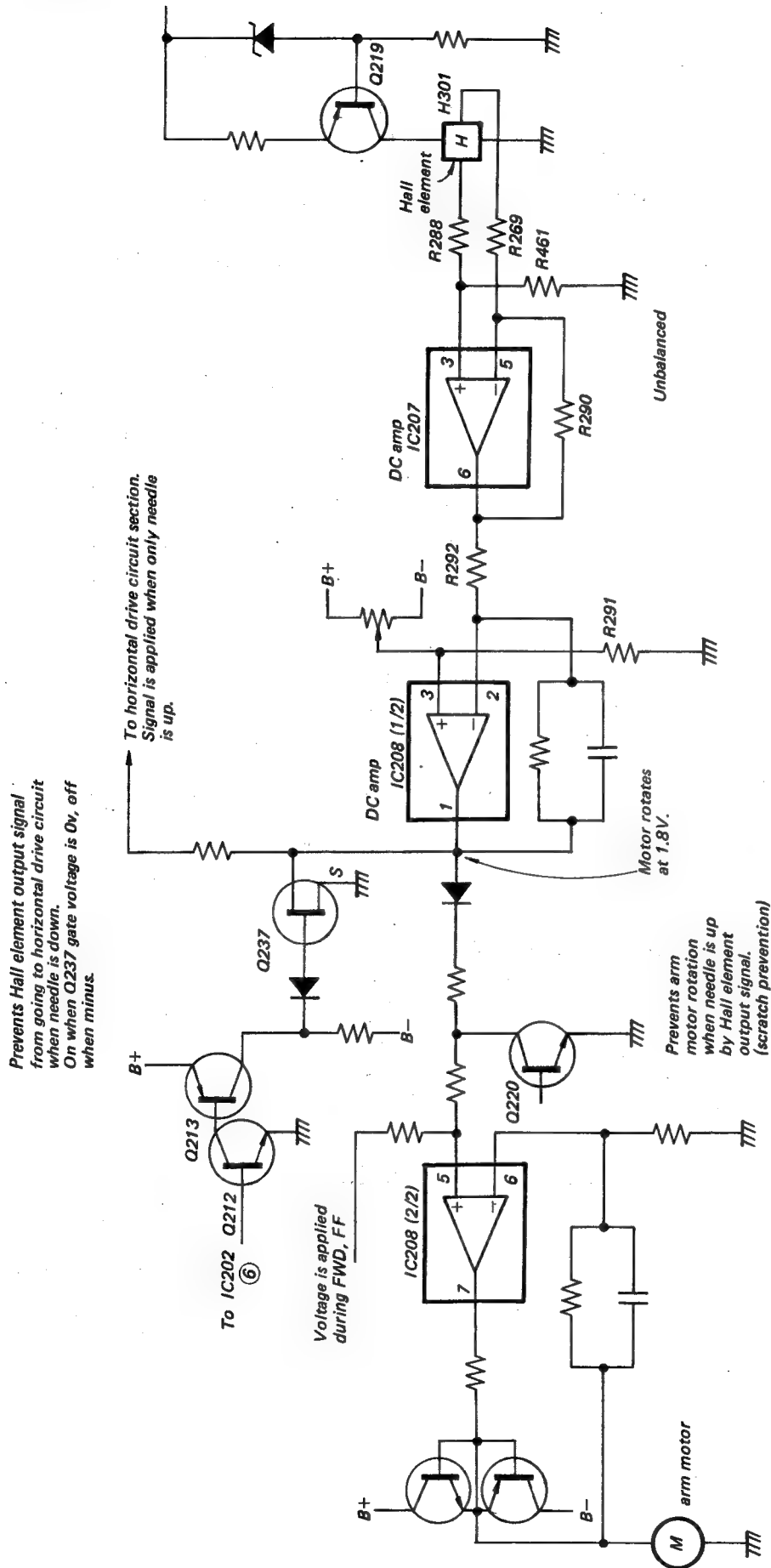


Fig. 9

3-4. Horizontal Detection Structure

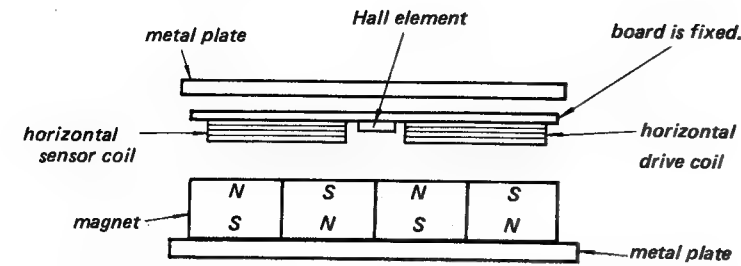


Fig. 10

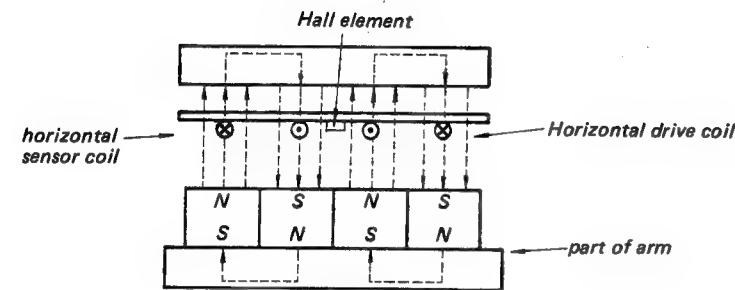


Fig. 11

If the arm moves in the direction of the arrow, current as shown in Figure 11 flows to the horizontal sensor coil. This current is detected and current flows to the horizontal drive coil so that the stylus traces the center of the record groove.

Also, when the arm moves over a certain value, the Hall element rotates the arm motor and moves the tonearm.

3-5. Vertical Detection Structure

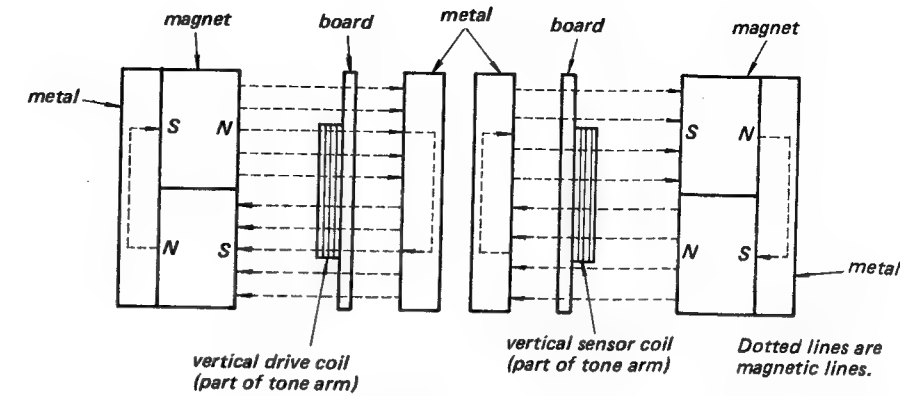


Fig. 12

Vertical detection is structured as shown in Figure 12. The sensor coil detects movement the same way as for horizontal detection and the tonearm is moved up and down by the drive coil.

Figure 13 (See page 17, 18) is the vertical MFB circuit.

Arm Position Detection

Lead-in position, return position and armrest position detection are performed by PH301, 302.

This is done by detecting arm driving base assembly slits, and when PH301 and 302 are both on, it is in the armrest position. Return position is different for 30cm and 17cm. When PH301 is on, it is in 30cm return position, and in 17cm return position when PH301 goes off. (Refer to Figure 14.)

Arm motor moves to 30cm and 17cm drop point at high-speed. When PH301 goes on, arm motor speed is reduced. Then, the position that it goes off is each drop point.

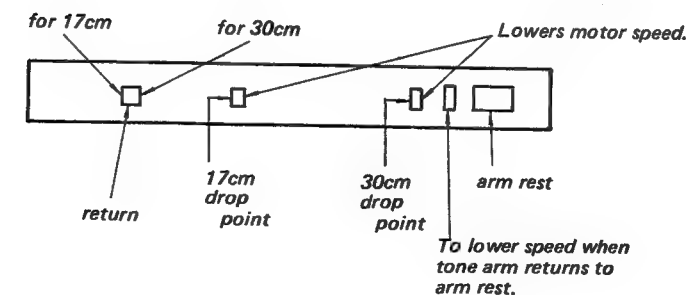


Fig. 14

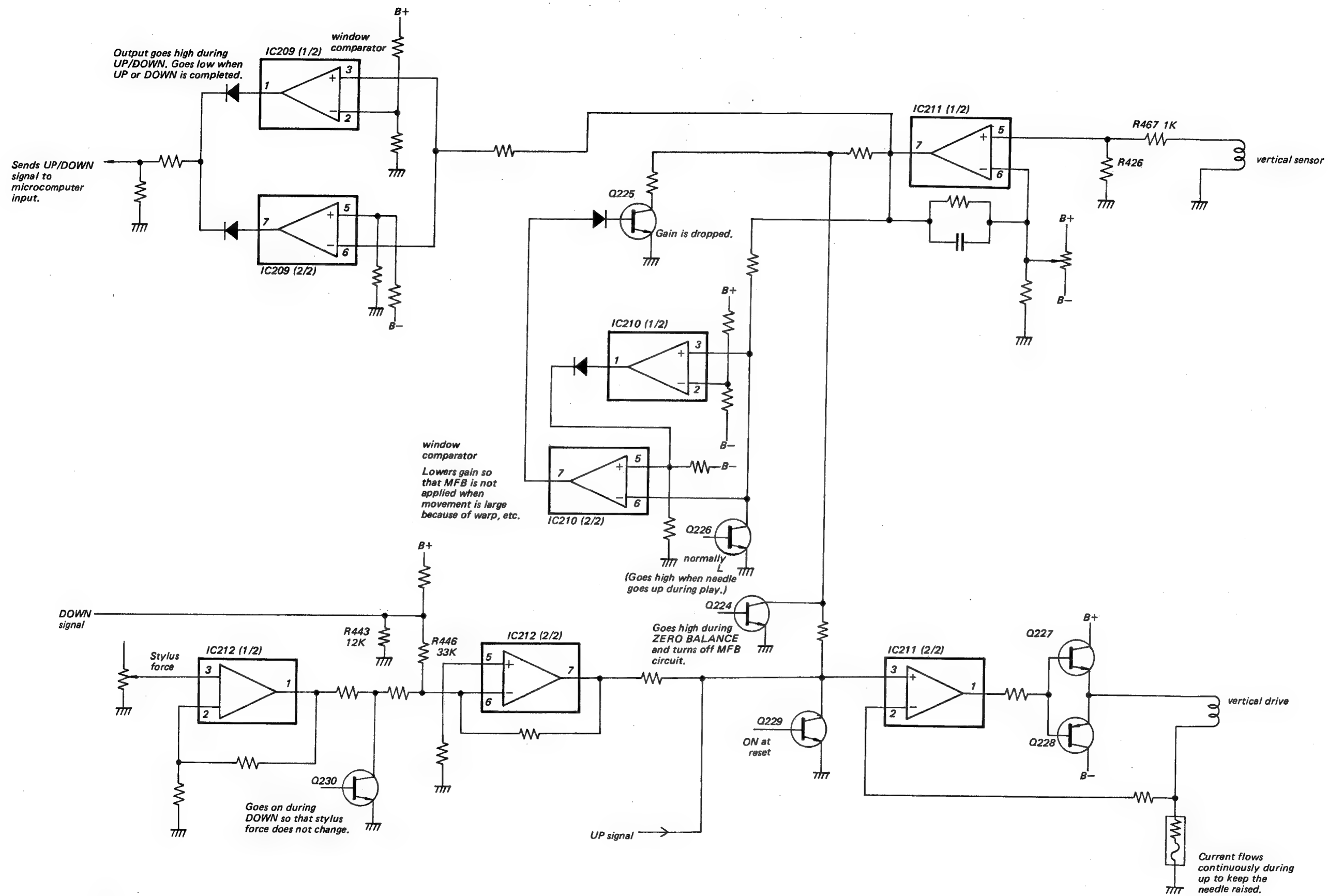


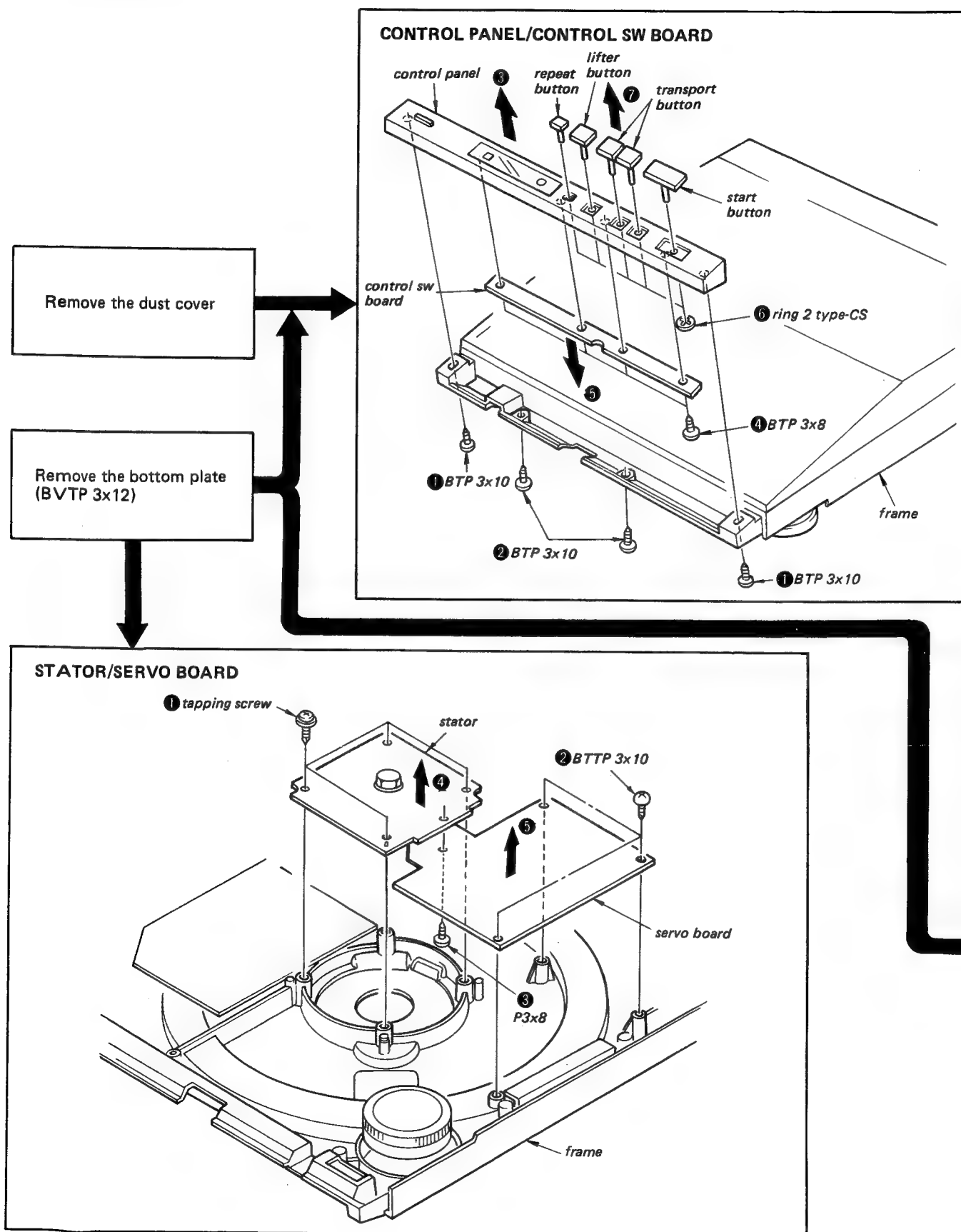
Fig. 13

Fig. 13

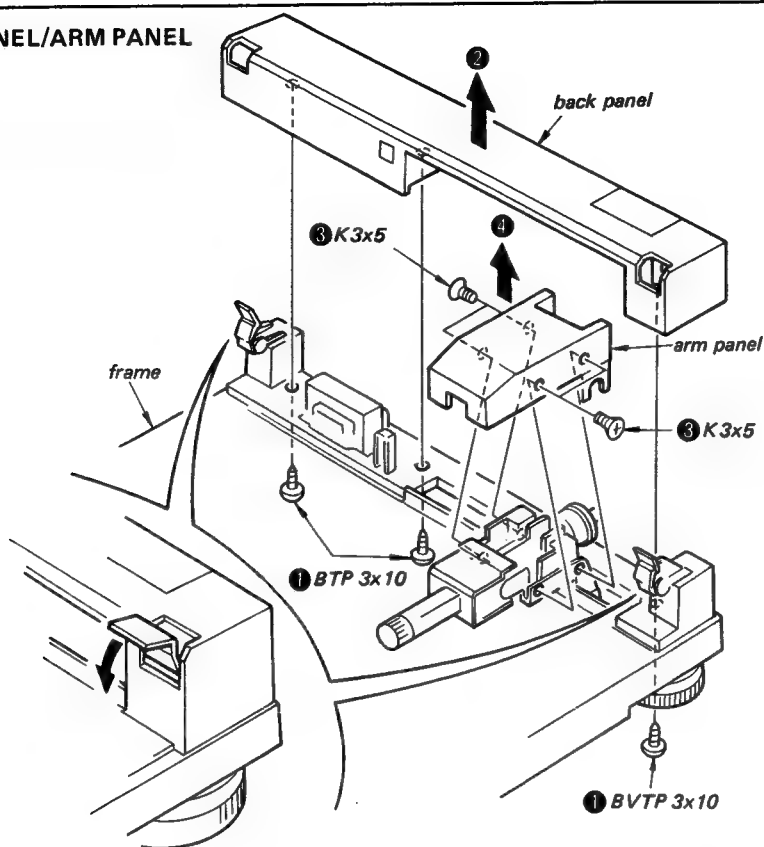
SECTION 3 DISASSEMBLY

3-1 REMOVAL

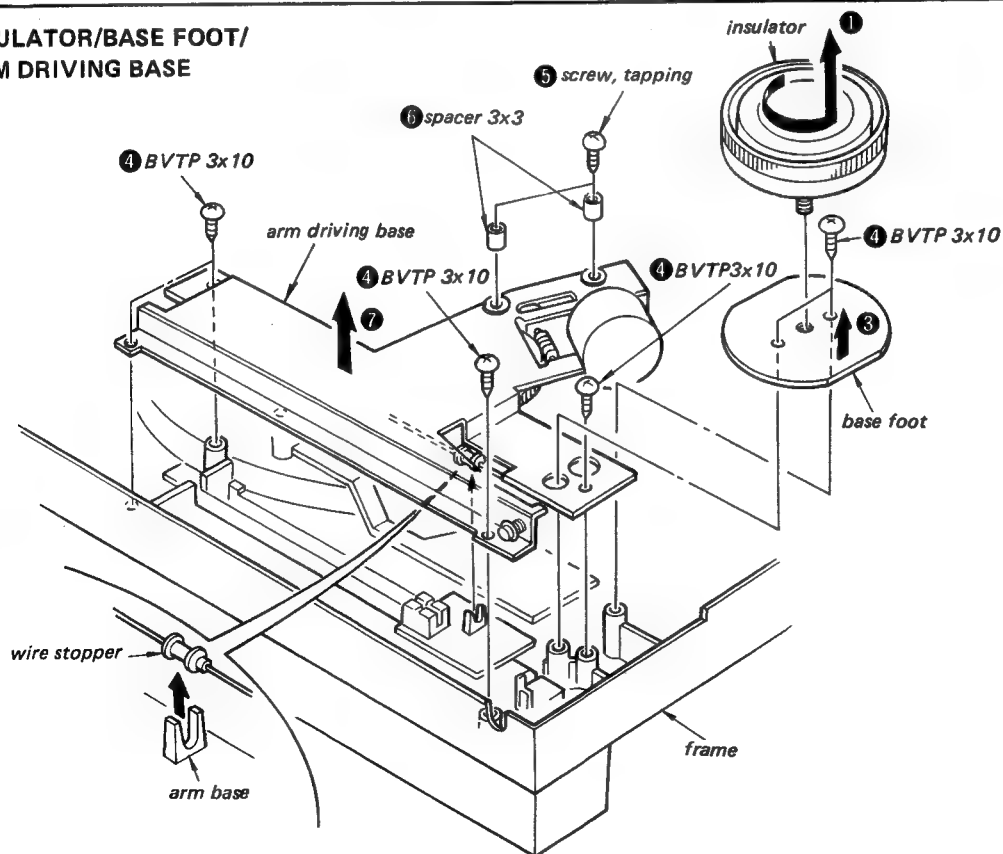
- Follow the disassembly procedure in the numerical order given.



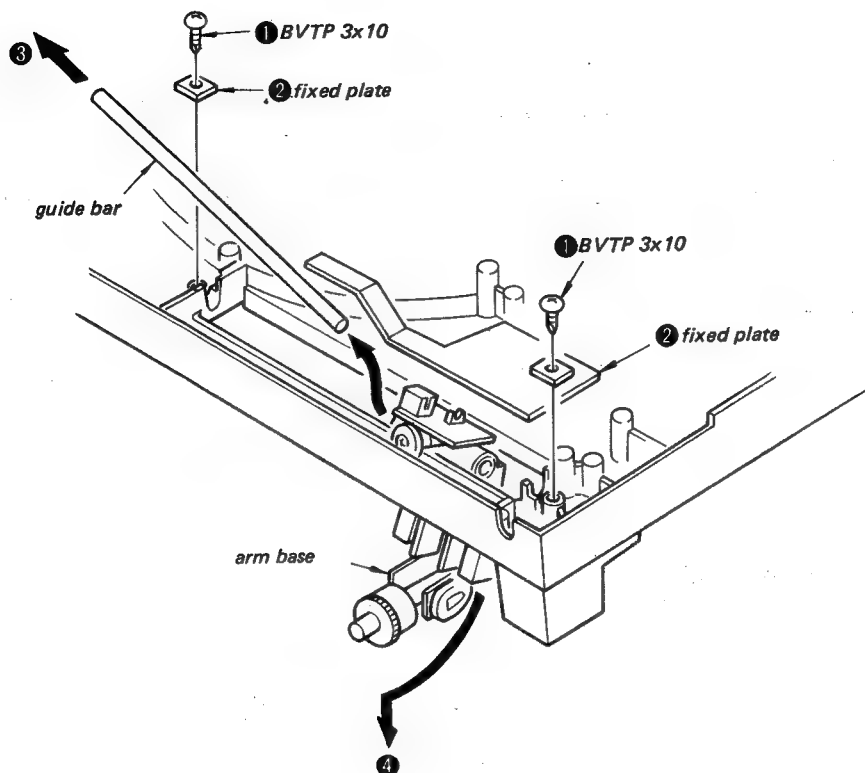
BACK PANEL/ARM PANEL



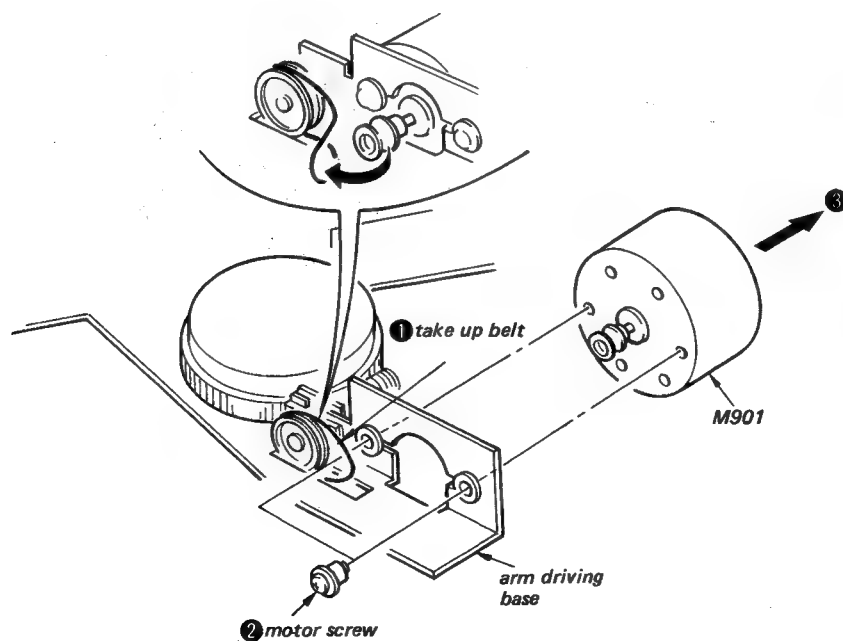
**INSULATOR/BASE FOOT/
ARM DRIVING BASE**



GUIDE BAR/ARM BASE

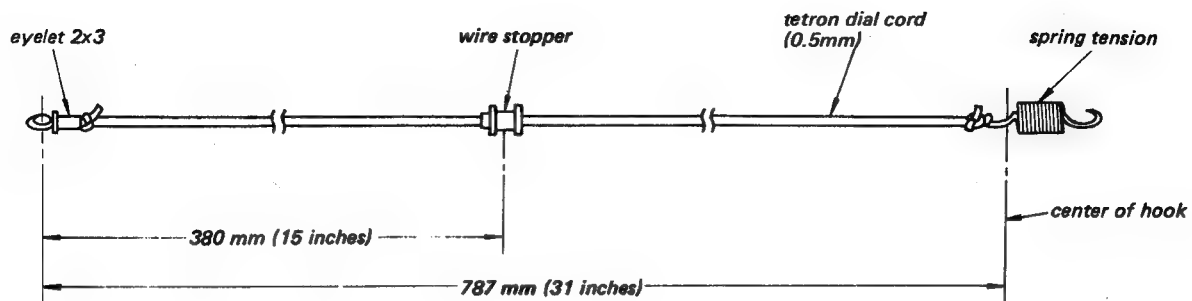


ARM MOTOR/TAKE UP BELT



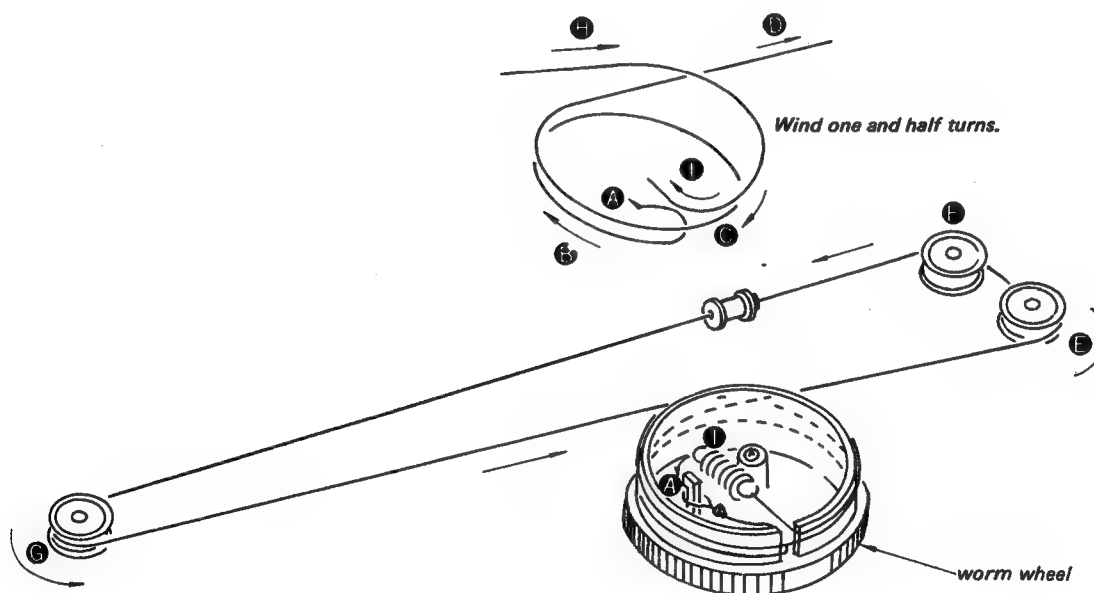
ARM DRIVE CORD STRINGING

1-1. Preparation



1-2. Stringing

- String in the order, **A** to **I**



SECTION 4 ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENT

Drop Point Adjustment

30cm

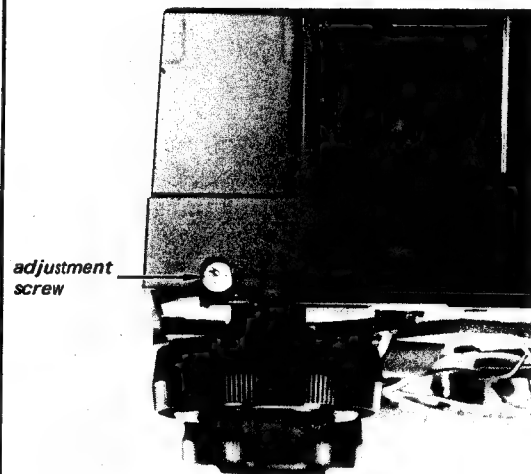
1. Place a test record (YFSC-16) on the turntable.
2. Press the START/STOP button for lead in.
3. Make sure that the drop point is within the specification.
4. Turn the adjustment screw, if necessary.
Count decreases when turning to the right.
Count increases when turning to the left.

Specification: 9 – 15 counts

17cm

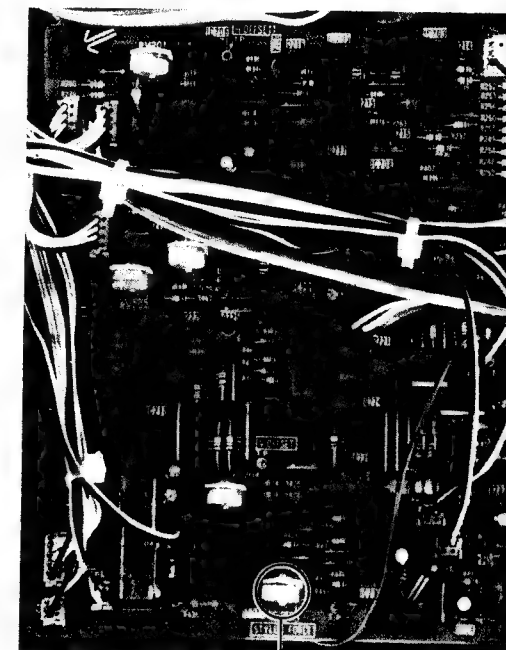
1. Place a test record (YFSB-6) on the turntable.
2. Press the START/STOP button for lead in.
3. Make sure that drop point is within the specification.
4. If the drop point is without the specification, repeat 30cm and 17cm adjustments.

Specification: 20 – 29 counts



4-2. ELECTRICAL ADJUSTMENTS

Stylus Force Adjustment

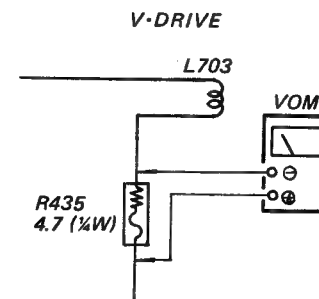


RV205

1. Move the arm about 8cm by pushing button.
2. Place the stylus pressure gauge below the stylus top.
3. Set STYLUS FORCE control adjustment knob at the position where the STYLUS FORCE indicator instantly changes from 2.4 to 2.5.
4. Make the arm down by pushing the UP/DOWN button.
5. Adjust RV205 so that the stylus force is within the specification.

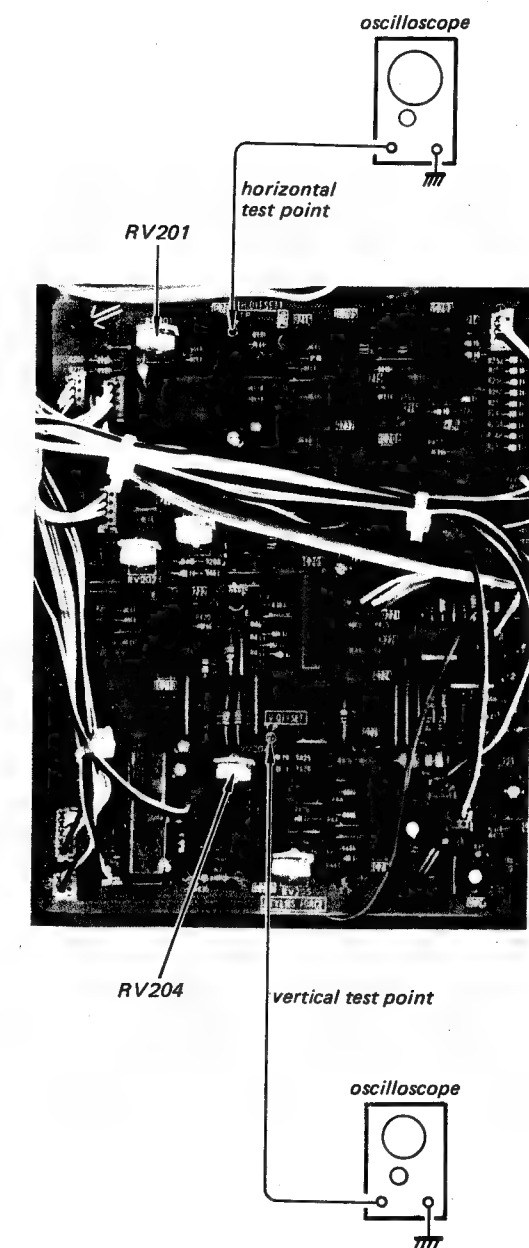
Specification: 2.43 ~ 2.47 g

Note: Stylus force is determined by the voltage which flows in vertical drive coil. Stylus force increases 1g for every 13mA. 1g stylus force is applied under zero balance. So it is normal when voltage across R435 is about 61mV.



Tonearm Horizontal/Vertical Motor Offset Adjustment

1. Connect an oscilloscope to horizontal test point.
2. Turn the power switch on.
3. Push button.
4. Adjust RV201 so that horizontal test point voltage is from -10 mV to 10 mV on the oscilloscope.
5. Connect an oscilloscope to vertical test point.
6. Adjust RV204 so that vertical test point voltage is from -10 mV to 10 mV on the oscilloscope.



Gai

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

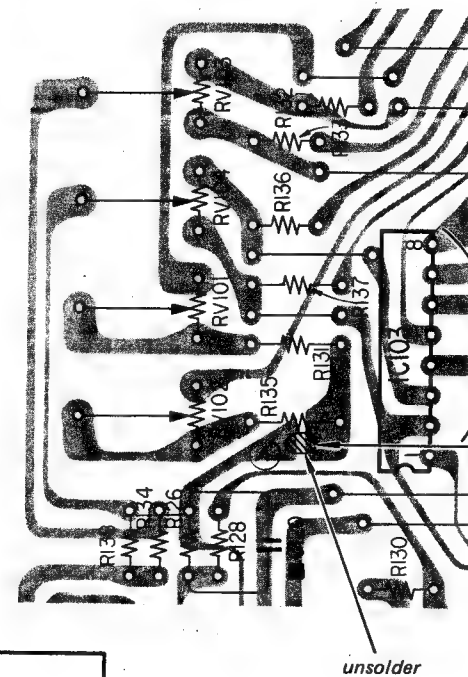
emit
Q11.
emi
Q11

Gain/Offset Adjustment

1. Unsolder pattern bridge of the point **A**.
2. Apply a 2V dc to the point **A** as illustrated.
3. SPEED switch : 33 rpm
POWER switch: turn it on and move the motor.
4. Adjust the gain adjustment RV101 at the switch position H101 for an 8 Vp-p reading on the oscilloscope.
5. Adjust the gain adjustment RV102 at the switch position H102 for an 8 Vp-p reading.
6. Adjust the offset adjustment RV103 at H101 for a 0V dc centering on the waveform.
7. Adjust the offset adjustment RV104 at H102 for a 0V dc centering on the waveform.

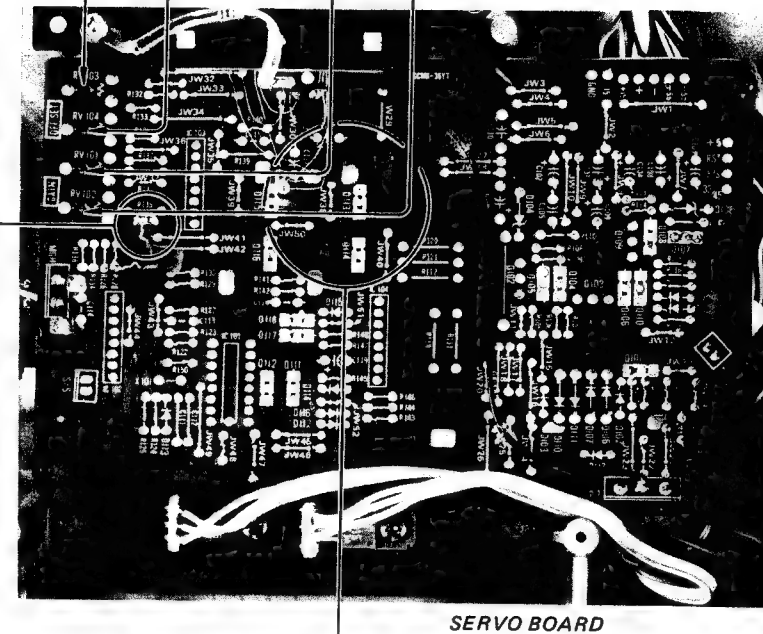
..... Gain adjustment

..... Offset adjustment

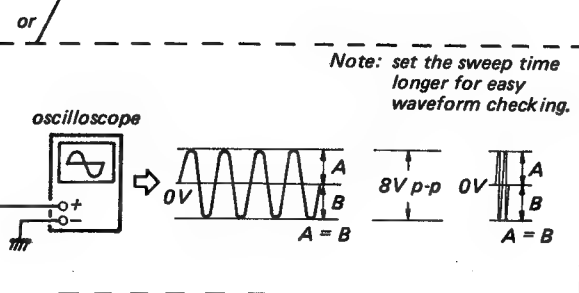
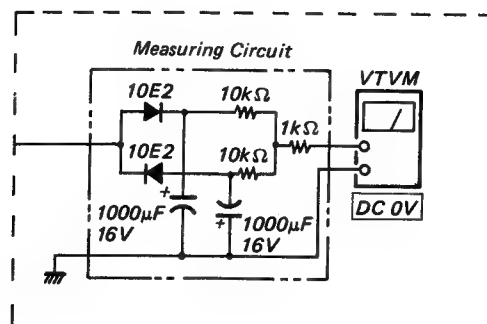


offset adjustment
RV103 RV104

gain adjustment
RV101 RV102



SERVO BOARD

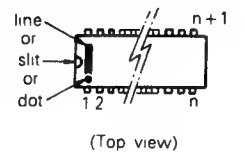


emitter of
Q113, Q114
H101

emitter of
Q115, Q116
H102

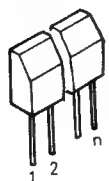
Semiconductor Lead Layout:

TC4050BP
TC4069UBP
TC4001BP
LM6402H-243
TC9142P

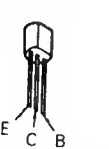


(Top view)

M5218L



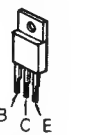
2SA952



2SA1048
2SC2458
DTC124ES
DTA124ES
DTA114ES
DTC114ES



2SB101E
2SD140E



2SD414
2SB731



2SK246

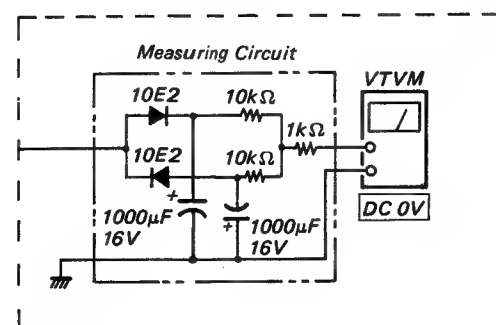
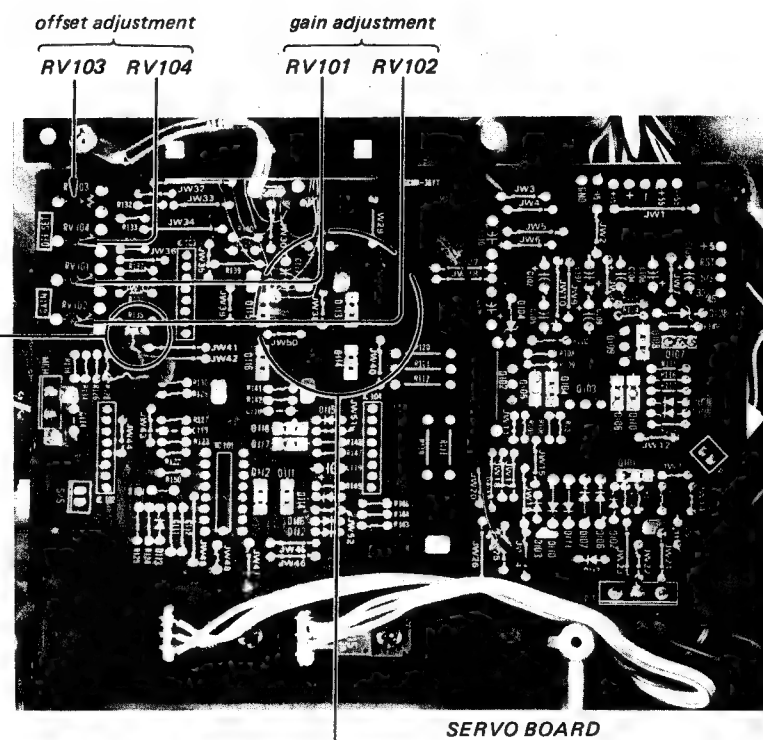
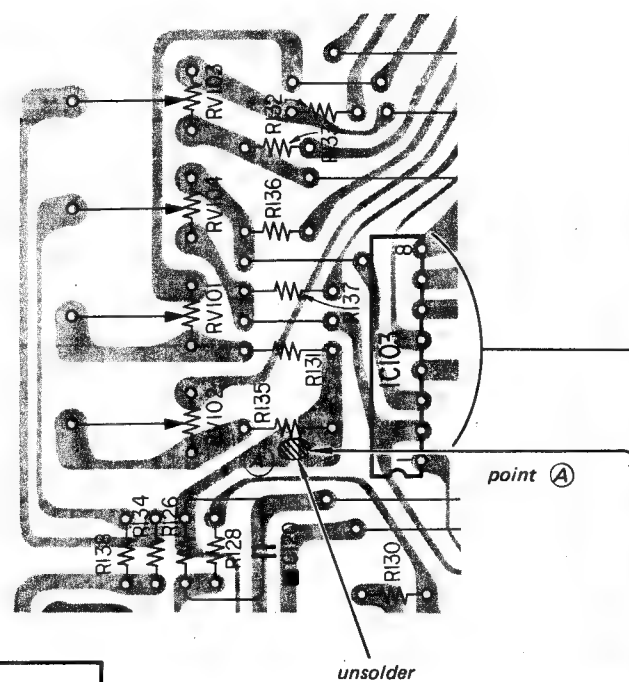


DTC143
DTC144
DTA144

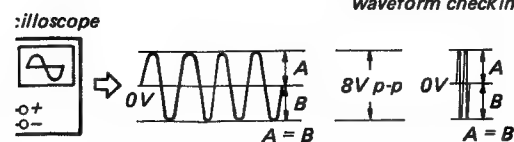


it (A) .
illustrated.

01 at the switch
 02 at the switch
 03 at H101 for a
 04 at H102 for a
 offset adjustment

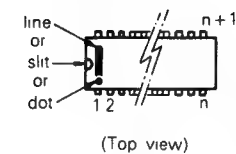


Note: set the sweep time longer for easy waveform checking.

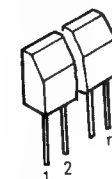


Semiconductor Lead Layouts

TC4050BP
TC4069UBP
TC4001BP
LM6402H-243
TC9142P



M5218L



2SA952



2SA1048
2SC2458
DTC124ES
DTA124ES
DTA114ES
DTC114ES



2SB1015
2SD1406



2SD414
2SB731



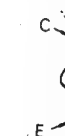
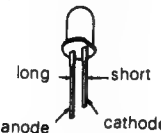
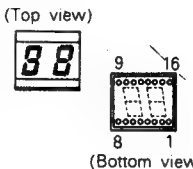
2SK246



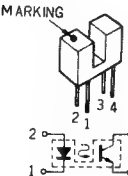
DTC143TS
DTC144ES
DTA144ES



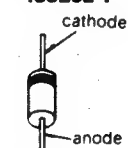
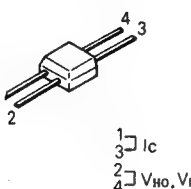
PH101

**GL5HD21****GL-7N202**

GP-1L04

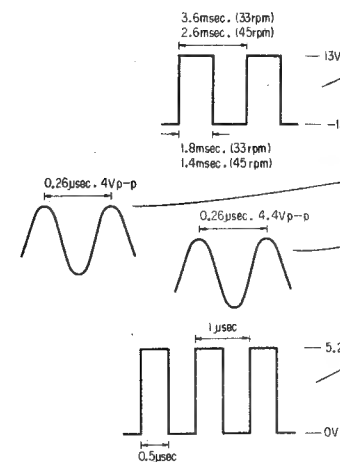
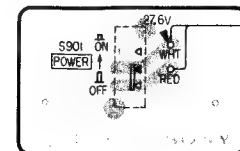
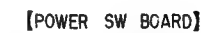
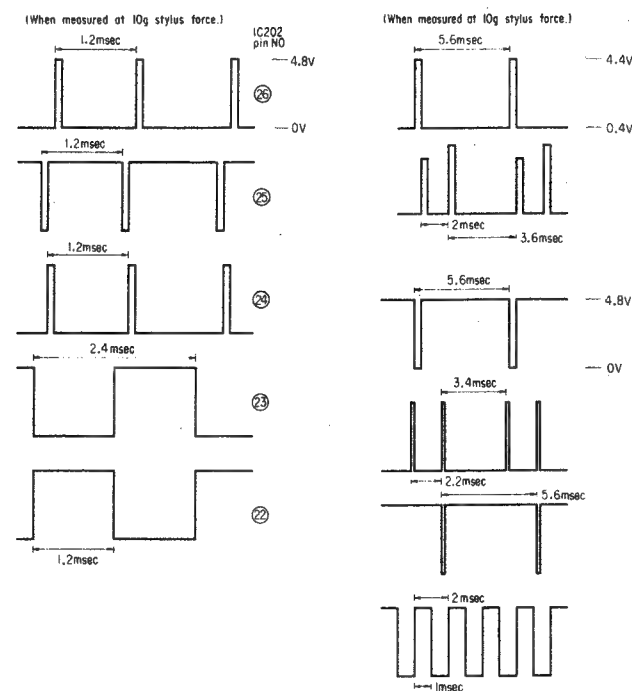


HZ4B3
HZ6B1L
10ES
1SS202-1

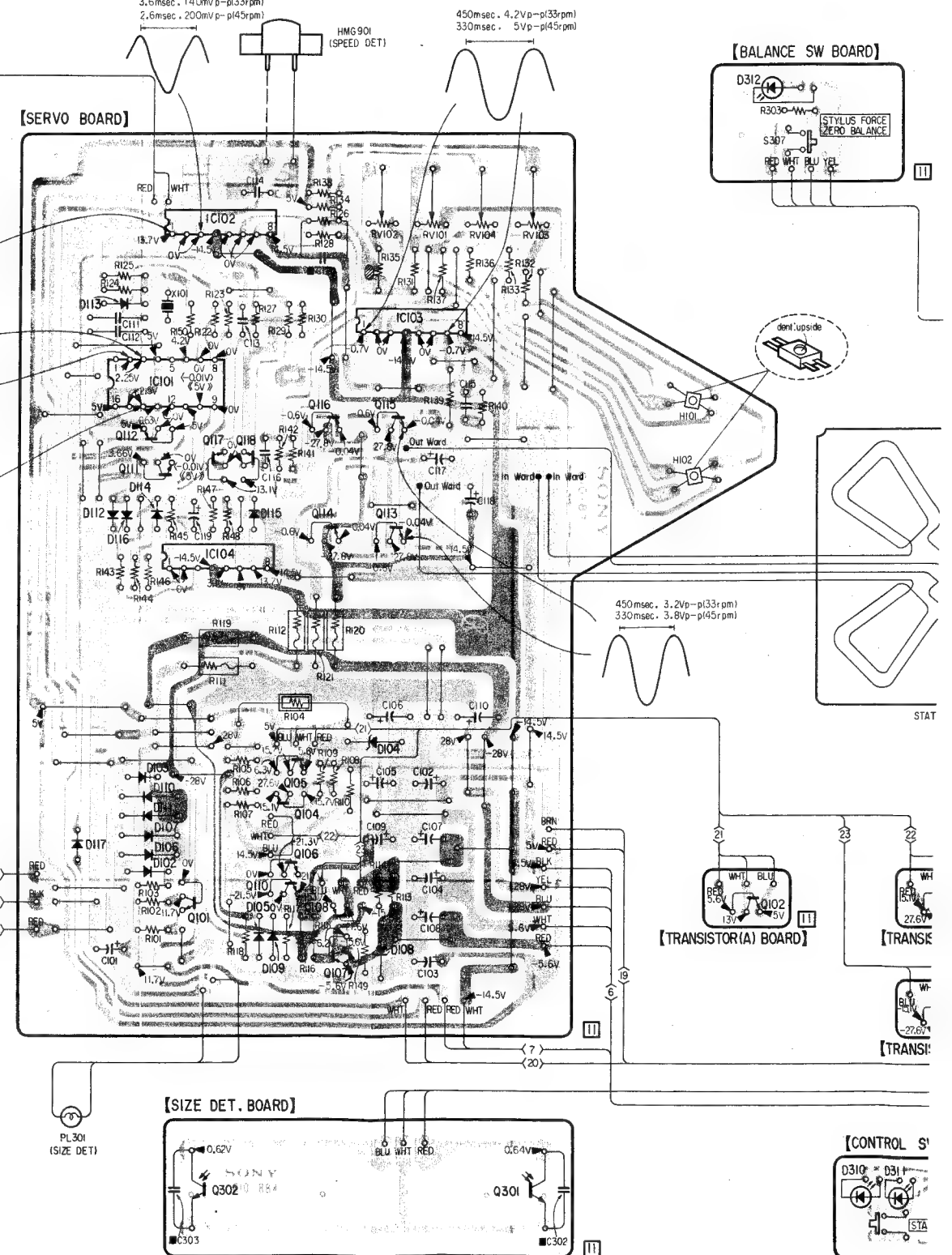
**THS102A**

● See page 27 for semiconductor lead layouts

- ○ : parts extracted from the component side.
- — : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- [hatched] : B+ pattern
- [dotted] : B- pattern

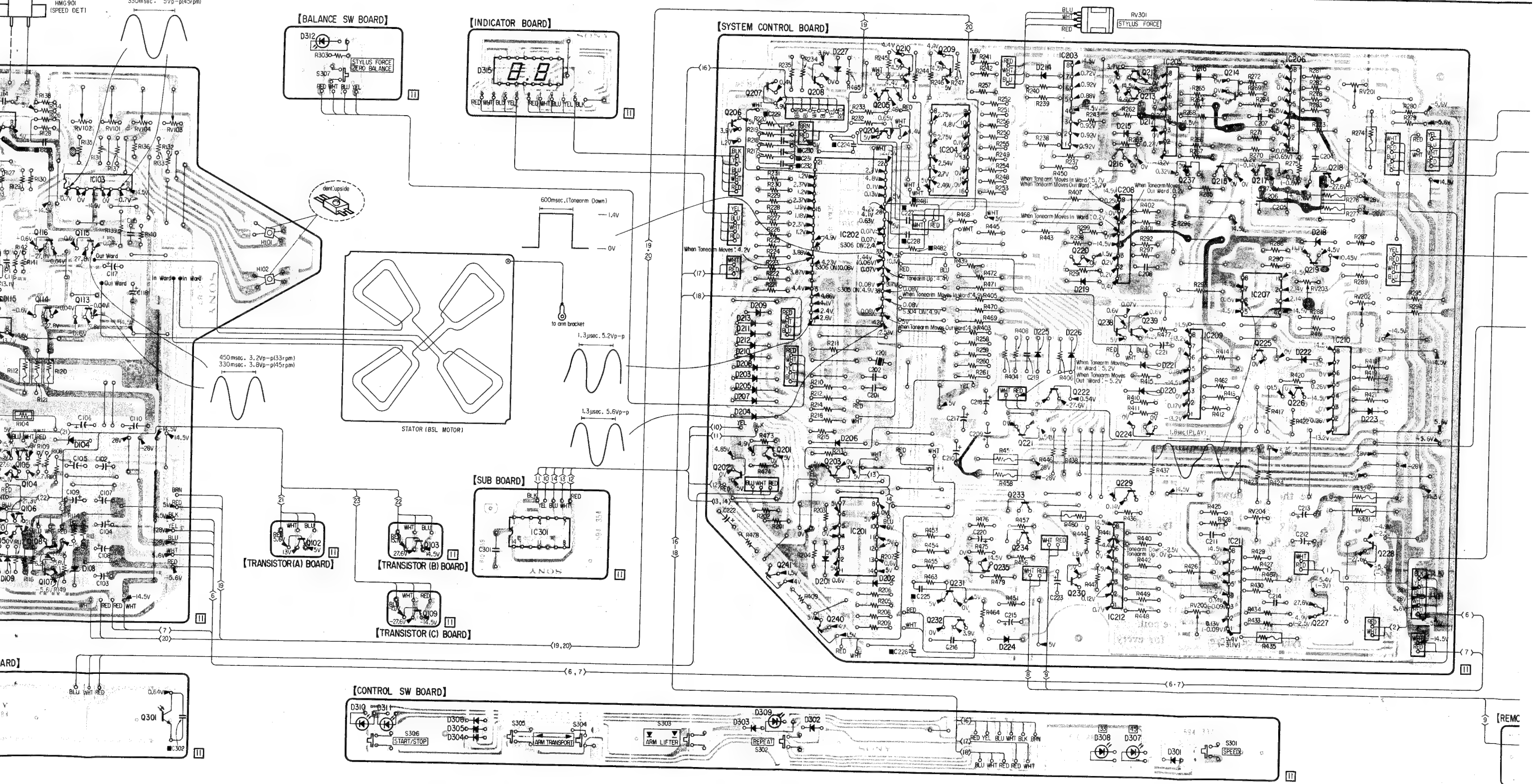


Q, IC	111	112	117	118	101	105	110	116	114	115	108	107	301	102	109	106
D	113	111	107	106												
RV	112	116	114			115				104				312		
	117	103	110	102		105	109			108	RV102, RV101, RV104, RV103				310	311



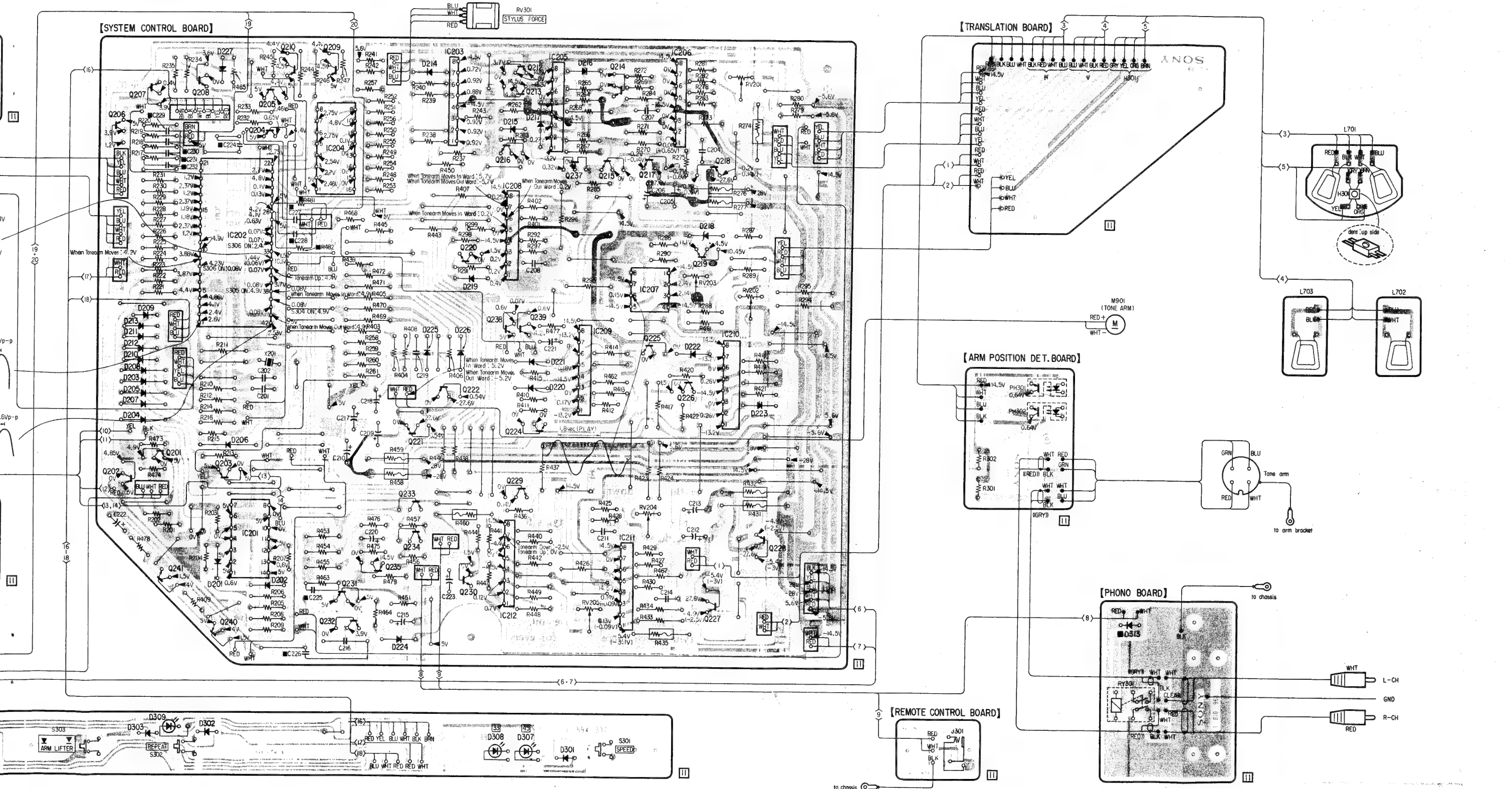
M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A1	B1
---	---	---	---	---	---	---	---	---	---	---	---	---	---	----	----

IC102 104 6 110 105 104 114	IC103 116 108 115 113 107	102	103 109	IC301	206 202	207 201	241	208	IC202 203 240	IC201	205 204	210	209 IC204	231 232	235	221 233 234	IC203 222	220 230	212 238 213 239 216 IC208 229 224 IC212	237 IC205	214 215 IC211	217 225 IC206	219 218 IC210	227 228
115 05 109	104 108 RV102, RV101, RV104, RV103	312	310 311	306 305 315 304	209 212 203 207 213 210 205 204 211 208	303 309	302	201	202	224 225	226 RV301	219 308	215 307	221 220	216 301	217 RV205	218 RV204	222 RV203	218 RV201	223 RV202				

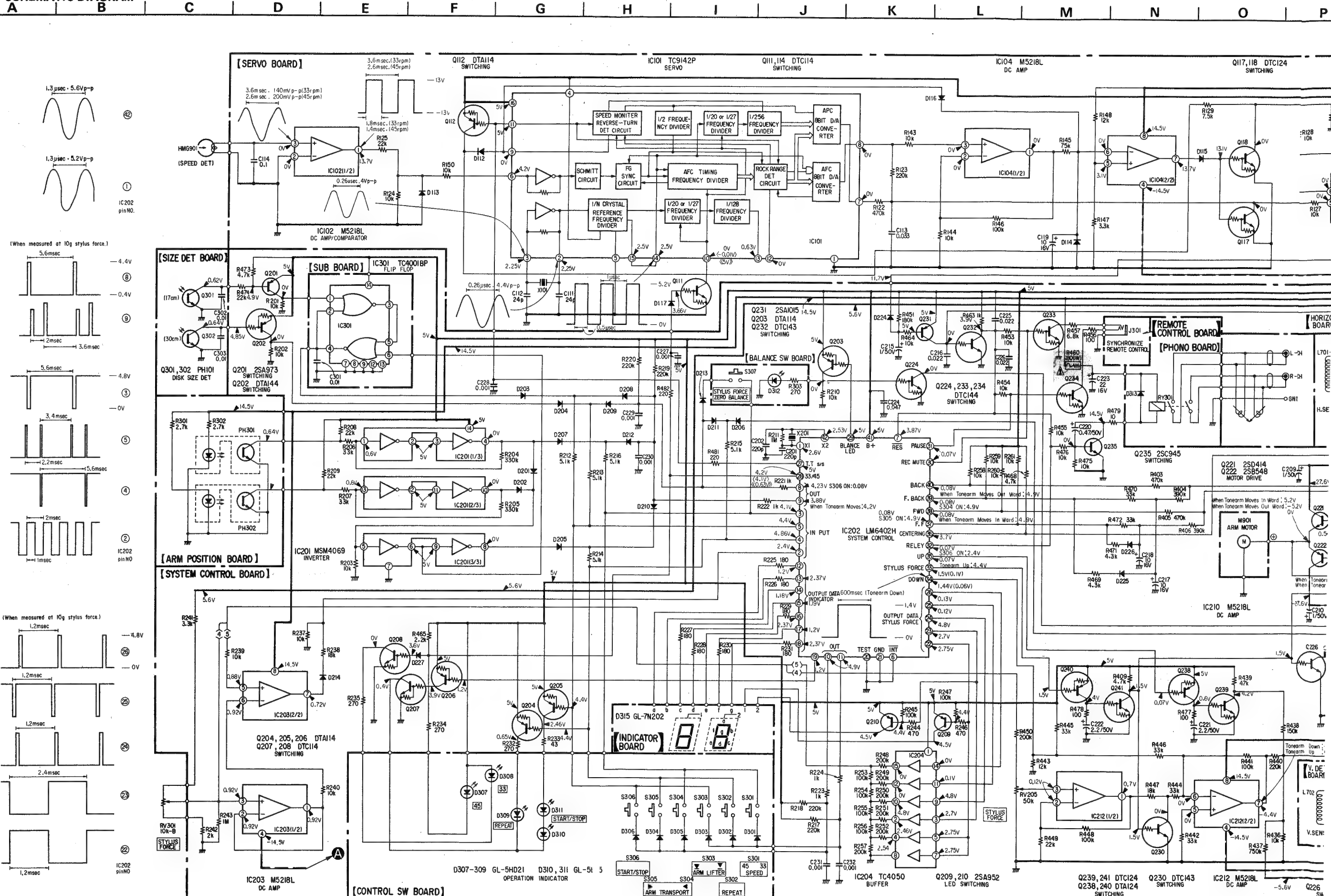


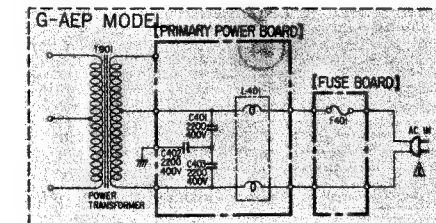
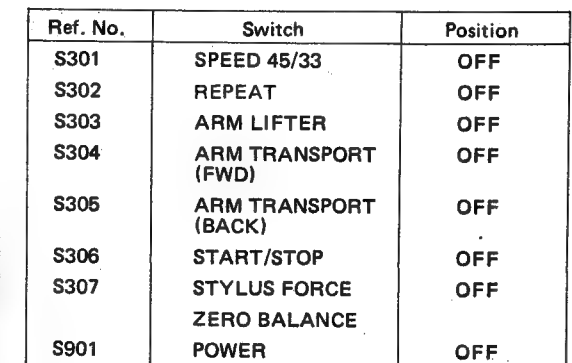
S T U V W X Y Z A1 B1 C1 D1 E1 F1 G1 H1 I1

206	207	241	208	IC202	205	210	209	231	235	221	IC203	220	212	238	237	214	217	IC206	219
202	201		240	IC201	204	IC204	232	233	234	222	230	216	213	239	IC205	215	IC211	225	IC210
209	212	203	207										229	224	IC212	IC209	IC207	226	227
213	210	205	204	227	206	202		224	214	226	215	221	217	216		218	222	223	
211	208			201				219	RV301	308	307	301	RV205	RV204	RV203	RV201	RV202		
303	309	302																	
																			Q, IC
																			D
																			RV

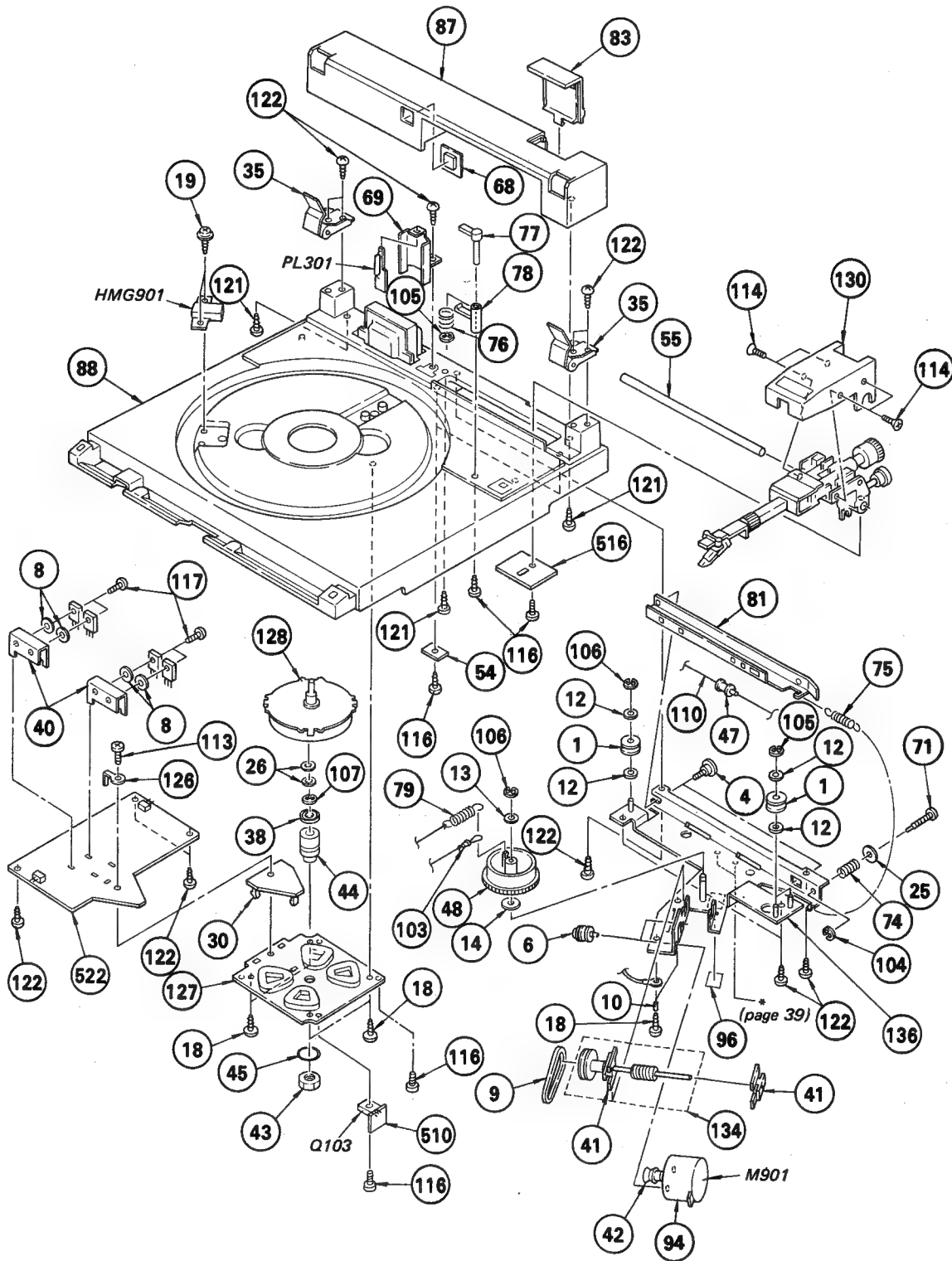
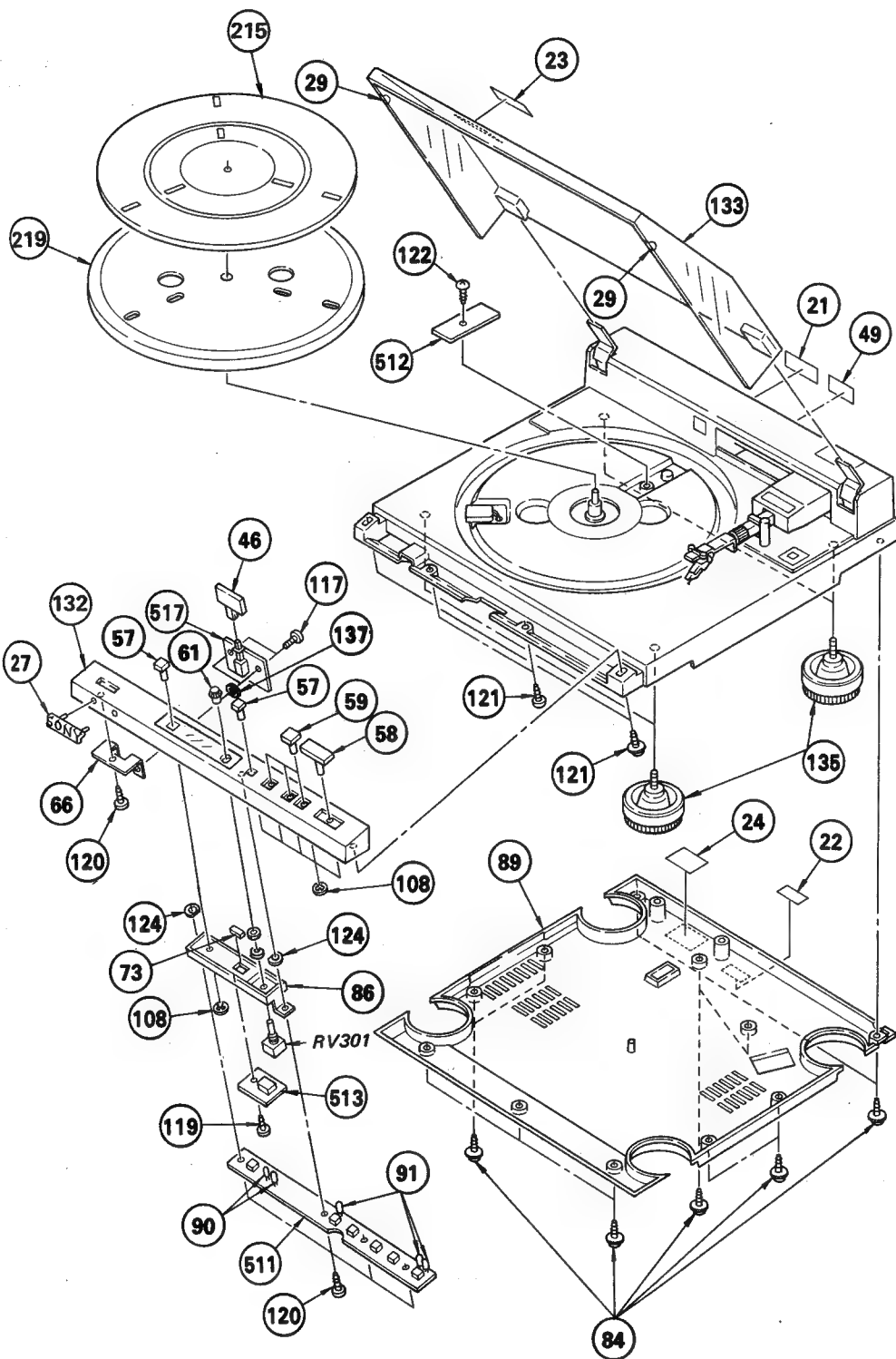


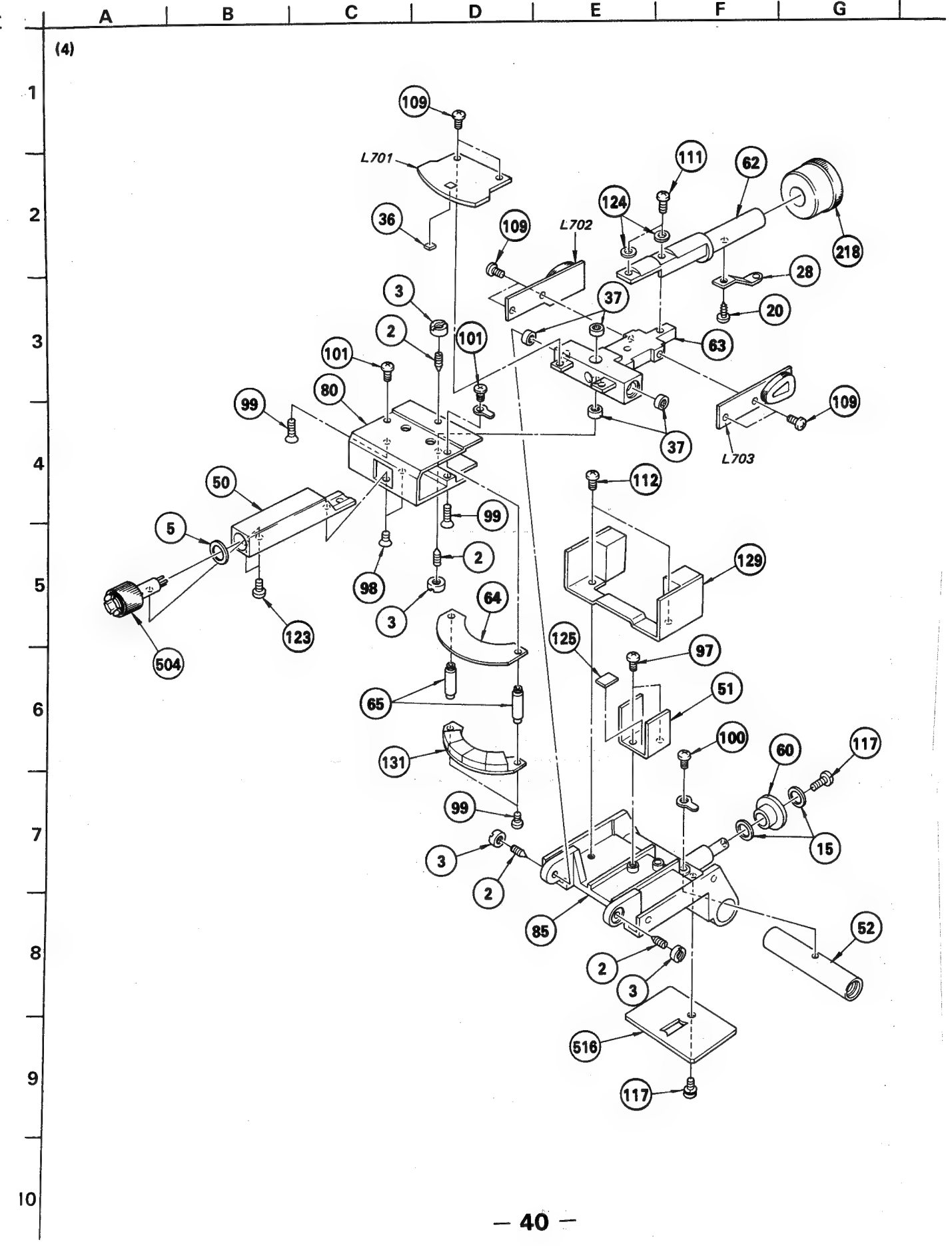
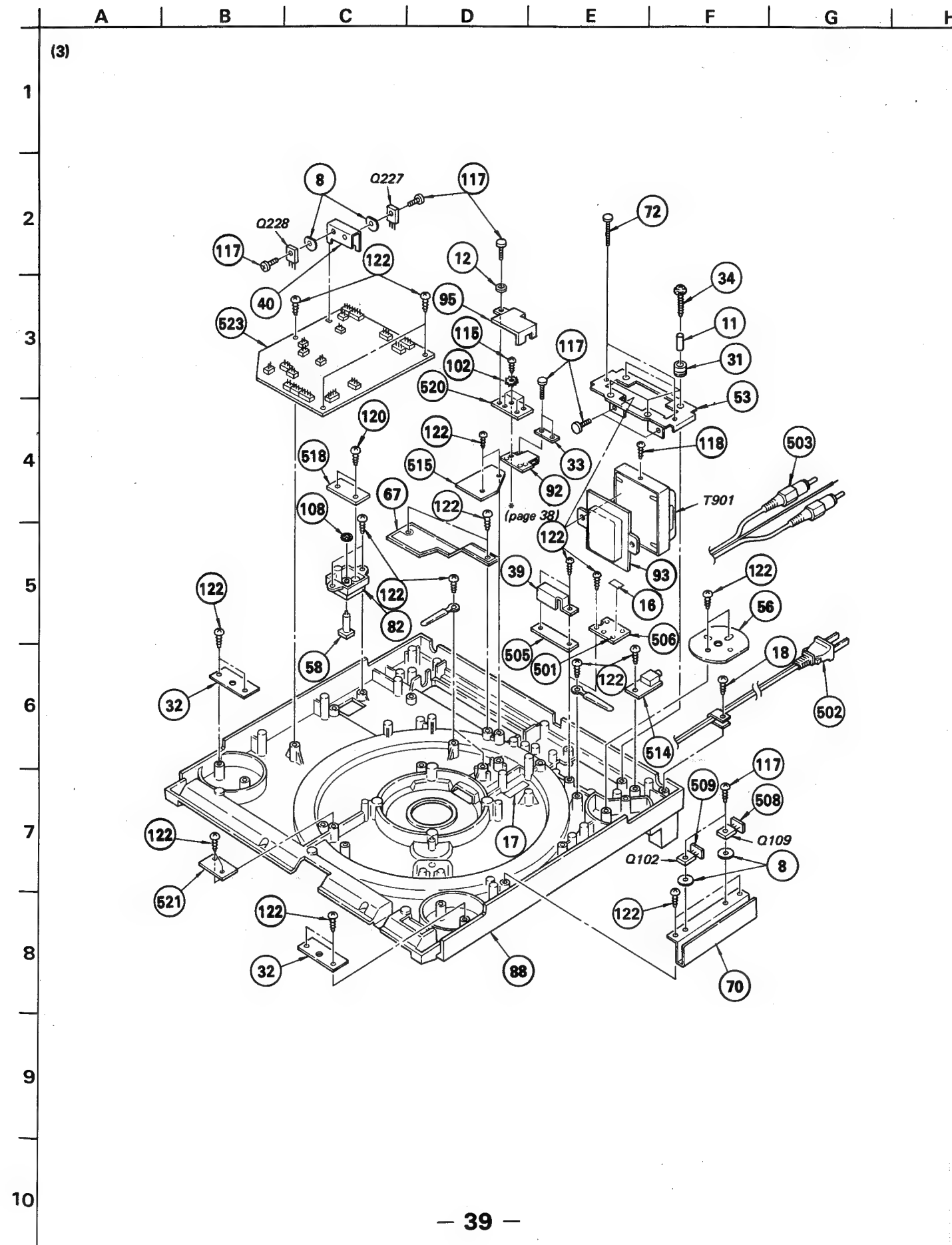
5-2 SCHEMATIC DIAGRAM





EXPLODED VIEWS AND PARTS LIST





GENERAL SECTION

No.	Part No.	Description
1	2-057-730-00	PULLEY
2	2-203-518-71	SCREW, PIVOT
3	2-203-519-00	NUT (A), LOCK, PIVOT
4	3-465-048-00	SHAFT
5	3-493-850-00	WASHER
6	3-570-027-00	SCREW, MOTOR
7	
8	3-572-365-01	SHEET (A), INSULATING
9	3-573-122-00	BELT, TAKE-UP
10	3-654-058-00	SPACER 3X3
11	3-657-842-11	SPACER (3X7)
12	3-701-440-21	WASHER, 3.5
13	3-701-441-01	WASHER
14	
15	3-701-443-11	WASHER
16	3-701-948-11	(G·AEP).....LABEL, FUSE
16	3-701-946-21	(US,Canadian)....LABEL, FUSE
17	3-703-044-26	(US,Canadian)....LABEL, CAUTION
18	3-703-136-00	SCREW, TAPPING
19	3-703-137-00	SCREW, +PTPWH 3X10
20	3-703-454-00	SCREW, TAPPING
21	3-703-677-00	(US)....LABEL, CAUTION, MAIN, NEW UL
22	3-703-680-00	(US)....LABEL, CAUTION, SUB, NEW UL
23	3-703-705-41	STICKER, SONY SYMBOL (30)
24	3-795-733-11	(US,Canadian)....LABEL, CARTION, FITTING
25	4-812-554-00	WASHER
26	3-845-354-00	WASHER (DIA.7.6)
27	4-836-828-00	EMBLEM, SONY
28	4-853-043-00	SPRING (B), GUIDE
29	4-857-601-00	CUSHION, DUST COVER
30	4-857-642-00	HOLDER, PC BOARD
31	4-858-522-00	RUBBER, FLOATING
32	4-858-544-00	BASE, INSULATOR
33	4-861-950-00	HOLDER, PHONO CORD
34	4-872-417-00	SCREW (M3X18)
35	4-878-443-11	HINGE
36	4-878-516-00	RETAINER, HOLE ELEMENT
37	4-881-618-00	BEARING, PIVOT
38	4-885-135-00	RETAINER, THRUST
39	4-885-197-00	(AEP)....PROTECTOR
40	4-885-562-11	HEAT SINK
41	4-885-703-00	GUIDE, WORM SHAFT
42	4-885-704-03	PULLEY, MOTOR
43	4-885-723-00	NUT, BEARING
44	4-885-724-00	BEARING
45	4-885-728-03	PACKING

GENERAL SECTION

No.	Part No.	Description
46	4-885-734-12	BUTTON, POWER
47	4-885-744-00	STOPPER, WIRE
48	4-885-749-00	WHEEL, WORM
49	4-901-601-00	(US,Canadian)....LABEL, MODEL NUMBER
49	4-901-662-00	(AEP).....LABEL, MODEL NUMBER
49	4-901-680-00	(G·AEP).....LABEL, MODEL NUMBER
50	4-901-602-00	PIPE, ARM
51	4-901-604-00	YOKE (B), VERTICAL
52	4-901-605-00	SLIDER
53	4-901-607-03	HOLDER, TRANSFORMER
54	4-901-608-00	PLATE, FIXED
55	4-901-609-00	BAR, GUIDE
56	4-901-610-00	BASE, FOOT
57	4-901-615-00	BUTTON, REPEAT
58	4-901-616-00	BUTTON, START
59	4-901-617-00	BUTTON, LIFTER
60	4-901-618-00	GUIDE, ROLLER
61	4-901-619-00	KNOB, ADJUSTMENT
62	4-901-622-00	BAR, WEIGHT
63	4-901-623-00	HOLDER, BEARING
64	4-901-626-00	YOKE (B), HORIZONTAL
65	4-901-627-00	SUPPORT, MOTOR
66	4-901-629-00	BRACKET, SWITCH
67	4-901-630-00	GUIDE, LEAD WIRE
68	4-901-631-00	WINDOW, LAMP
69	4-901-632-00	COVER, LAMP
70	4-901-633-00	HEAT SINK
71	4-901-634-00	SCREW, ADJUSTMENT
72	4-901-635-00	SCREW, TRANSPORT
73	4-901-636-00	COVER, INDICATION
74	4-901-637-00	SPRING, COMPRESSION
75	4-901-638-00	SPRING, TENSION
76	4-901-639-00	SPRING, COMPRESSION
77	4-901-640-00	REST (UPPER), ARM
78	4-901-641-00	REST (LOWER), ARM
79	4-901-642-00	SPRING, TENSION
80	4-901-643-00	BRACKET, ARM
81	4-901-644-00	PLATE, SHUTTER
82	4-901-645-00	PANEL, INDICATION
83	4-901-646-02	LTD, REAR
84	7-685-648-29	SCREW +BVTP 3X12
85	4-901-649-02	BASE, ARM
86	4-901-650-02	GUIDE, PANEL
87	4-901-653-02	PANEL, BACK
88	4-901-655-00	FRAME
89	4-901-656-12	(US,Canadian)....PLATE, BOTTOM
89	4-901-656-02	(AEP).....PLATE, BOTTOM

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA....: μA...., UPA....: μPA...., UPC....: μPC,
 UPD....: μPD....

S-X555ES

GENERAL SECTION

No.	Part No.	Description
90	4-901-657-00	SPACER (A), LED
91	4-901-658-00	SPACER (B), LED
92	4-901-659-02	BRACKET, PHONO CORD
93	4-901-660-00	SUPPORT, FITTING, TRANSFORMER
94	4-901-661-00	CASE, MOTOR
95	4-901-663-02	PLATE, SHIELD
96	4-901-664-00	MATERIAL (A)
97	7-621-255-35	SCREW +P 2X5
98	7-621-555-12	SCREW +K 2X3
99	7-621-555-52	SCREW +K 2X8
100	7-621-770-87	SCREW +B 2.6X5
101	7-621-771-06	SCREW +B 2X5
102	7-623-422-07	LW 3, TYPE B
103	7-623-616-01	EYELET, 2X3
104	7-624-102-04	STOP RING 1.5, TYPE -E
105	7-624-104-04	STOP RING 2.0, TYPE -E
106	7-624-106-04	STOP RING 3.0, TYPE -E
107	7-624-133-24	STOP RING 7, TYPE-CE
108	7-624-190-81	STOP RING 2, TYPE-CS
109	7-627-554-17	SCREW, PRECISION +P 2X3.5
110	7-633-120-45	STRING, TETRON DIAL (0.5MM)
111	7-628-253-10	SCREW +PS 2X5
112	7-682-145-15	SCREW +P 3X4
113	7-682-148-13	SCREW +P 3X8
114	7-682-246-15	SCREW +K 3X5
115	7-682-545-09	SCREW +B 3X4
116	7-682-546-04	SCREW +BVTT 3X5 (S)
117	7-682-547-09	SCREW +B 3X6
118	7-682-947-01	SCREW +PSW 3X6
119	7-685-545-19	SCREW +BTP 3X6 TYPE2 N-S
120	7-685-546-19	SCREW +BTP 3X8 TYPE2 N-S
121	7-685-547-19	SCREW +BTP 3X10 TYPE2 N-S
122	7-685-647-29	SCREW +BVTP 3X10 TYPE2 SLIT
123	7-685-799-74	SCREW +PTT 1.7X3
124	7-688-001-02	W 2, SMALL
125	9-910-999-34	SPACER, INSULATING
126	9-911-840-XX	W 3, SMALL
127	A-4608-262-A	STATOR ASSY
128	A-4608-260-A	ROTOR ASSY
129	A-4675-020-A	YOKE (A) ASSY, VERTICAL
130	X-4901-604-1	ARM PANEL ASSY
131	X-4901-605-1	YOKE ASSY
132	X-4901-606-1	PANEL, CONTROL ASSY
133	X-4878-419-3	COVER ASSY, DUST
134	X-4885-710-2	WORM ASSY
135	X-4901-601-0	INSULATOR ASSY
136	X-4901-602-0	BASE ASSY, ARM DRIVING
137	4-901-678-00	(G·AEP).....WASHER (T)

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
200	1-551-559-11	LEAD WIRE (WITH TERMINAL)
201	1-551-559-21	LEAD WIRE (WITH TERMINAL)
202	1-551-559-31	LEAD WIRE (WITH TERMINAL)
203	1-551-559-41	LEAD WIRE (WITH TERMINAL)
204	2-054-619-00	SPACER, CARTRIDGE
205	3-548-372-00	BAG, POLYETHYLENE
206	3-701-613-00	BAG, POLYETHYLENE
207	3-701-616-00	BAG, POLYETHYLENE
208	3-701-806-00	ADAPTOR, 45, (E)
209	3-773-518-21	(US,Canadian)...MANUAL, INSTRUCTION
210	3-773-518-11	(AEP).....MANUAL, INSTRUCTION
211	3-773-518-11	(Canadian).....MANUAL, INSTRUCTION
212	4-856-385-00	SHEET (C), PROTECTION
213	4-869-959-00	PLATE, LIGHT INTERCEPTION
214	4-869-962-00	ADJUSTOR, DP
215	4-873-301-00	SHEET, TURNTABLE
216	4-881-698-00	PLATE, PROTECTION
217	4-901-606-00	WEIGHT, SUB
218	4-901-612-00	WEIGHT, COUNTER
219	4-901-651-00	TURNTABLE
220	4-901-666-00	INDIVIDUAL CARTON
221	4-901-667-00	SPACER, ARM
222	4-901-668-00	COVER, BOX ACCESSORY
223	4-901-669-00	PILLOW, ARM
224	4-901-670-00	HOLDER, TURNTABLE
225	4-901-671-00	CUSHION (LEFT)
226	4-901-672-00	CUSHION (RIGHT)
227	4-901-673-00	BOX, ACCESSORY
228	X-4878-404-0	SHELL ASSY
229	X-4878-421-0	SCREW ASSY, FITTING, CARTRIDGE
230	3-773-518-41	(G·AEP).....MANUAL, INSTRUCTION

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CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

UPD....: μPD....

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-533-131-00	(US, Canadian G-AEP)...HOLDER, FUSE
502	▲1-534-817-00	(AEP).....CORD, POWER
502	▲1-534-986-XX	(US, Canadian)...CORD, POWER
502	▲1-534-817-00	(AEP, G-AEP)...CORD, POWER
503	1-555-666-00	CORD (WITH PLUG)
504	1-561-201-41	CONNECTOR, NECK CYLINDER
505	●1-608-536-00	(AEP, G-AEP)...PC BOARD, PRIMARY TRANSLATION
506	●1-610-850-00	(US, Canadian)...PC BOARD, FUSE
507	
508	●1-610-872-00	PC BOARD, TRANSISTOR (A)
509	●1-610-873-00	PC BOARD, TRANSISTOR (B)
510	●1-610-874-00	PC BOARD, TRANSISTOR (C)
511	●1-610-883-00	PC BOARD, CONTROL SW
512	●1-610-884-00	PC BOARD, SIZE DETECT
513	●1-610-885-00	PC BOARD, INDICATOR
514	●1-610-886-00	PC BOARD, REMOTE CONTROL
515	1-610-887-00	PC BOARD, TRANSLATION
516	●1-610-888-00	PC BOARD, ARM POSITION DETECT
517	●1-610-889-00	PC BOARD, POWER SW
518	●1-610-890-00	PC BOARD, BALANCE SW
519	
520	●1-610-968-00	PC BOARD, PHONO
521	●1-610-969-00	PC BOARD, SUB
522	●A-4619-216-A	MOUNTED PCB, SERVO
523	●A-4657-003-A	MOUNTED PCB, SYSTEM CONTROL
C101	1-123-353-00	ELECT 2.2MF 20% 50V
C102	1-123-320-00	ELECT 100MF 20% 16V
C103	1-123-295-00	ELECT 100MF 20% 6.3V
C104	1-123-356-00	ELECT 10MF 20% 16V
C105	1-123-359-00	ELECT 47MF 20% 50V
C106	1-123-349-00	ELECT 1000MF 20% 35V
C107	1-123-320-00	ELECT 100MF 20% 16V
C108	1-123-356-00	ELECT 10MF 20% 16V
C109	1-123-359-00	ELECT 47MF 20% 50V
C110	1-123-349-00	ELECT 1000MF 20% 35V
C111	1-161-339-00	CERAMIC 24PF 5% 50V
C112	1-161-339-00	CERAMIC 24PF 5% 50V
C113	1-130-626-00	FILM 0.033MF 5% 50V
C114	1-161-974-00	CERAMIC 0.1MF 0 16V
C115	1-108-577-00	MYLAR 0.082MF 5% 50V
C116	1-108-577-00	MYLAR 0.082MF 5% 50V
C117	1-123-380-00	ELECT 1MF 20% 50V
C118	1-123-380-00	ELECT 1MF 20% 50V
C119	1-123-356-00	ELECT 10MF 20% 16V
C120	1-130-626-00	METAL 0.033MF 5% 50V
C201	1-102-978-00	CERAMIC 220PF 5% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C202	1-102-978-00	CERAMIC 220PF 5% 50V
C204	1-130-624-00	FILM 0.022MF 5% 50V
C205	1-123-380-00	ELECT 1MF 20% 50V
C206	1-123-380-00	ELECT 1MF 20% 50V
C207	1-130-621-00	FILM 0.012MF 5% 50V
C208	1-130-621-00	FILM 0.012MF 5% 50V
C209	1-123-380-00	ELECT 1MF 20% 50V
C210	1-123-380-00	ELECT 1MF 20% 50V
C211	1-130-630-00	FILM 0.068MF 5% 50V
C212	1-123-380-00	ELECT 1MF 20% 50V
C213	1-123-380-00	ELECT 1MF 20% 50V
C214	1-130-624-00	FILM 0.022MF 5% 50V
C215	1-123-380-00	ELECT 1MF 20% 50V
C216	1-161-494-00	CERAMIC 0.022MF 30% 25V
C217	1-123-356-00	ELECT 10MF 20% 16V
C218	1-123-356-00	ELECT 10MF 20% 16V
C219	1-162-112-00	CERAMIC 0.0047MF 30% 25V
C220	1-123-351-00	ELECT 0.47MF 20% 50V
C221	1-131-459-00	ELECT 2.2MF 20% 50V
C222	1-131-459-00	ELECT 2.2MF 20% 50V
C223	1-123-317-00	ELECT 22MF 20% 16V
C224	1-130-630-00	METAL 0.047MF 5% 50V
C225	1-161-497-00	CERAMIC 0.022MF 30% 25V
C226	1-161-497-00	CERAMIC 0.022MF 30% 25V
C227	1-161-323-00	CERAMIC 0.001MF 10% 50V
C228	1-161-323-00	CERAMIC 0.001MF 10% 50V
C229	1-161-323-00	CERAMIC 0.001MF 10% 50V
C230	1-161-323-00	CERAMIC 0.001MF 10% 50V
C231	1-161-323-00	CERAMIC 0.001MF 10% 50V
C232	1-161-323-00	CERAMIC 0.001MF 10% 50V
C301	1-161-330-00	CERAMIC 0.01MF 30% 25V
C302	1-161-330-00	CERAMIC 0.01MF 30% 25V
C303	1-161-330-00	CERAMIC 0.01MF 30% 25V
C401	▲1-161-734-00	CAP. CERAMIC 2200P 20% 40V
C402	▲1-161-734-00	CAP. CERAMIC 2200P 20% 40V
C403	▲1-161-734-00	CAP. CERAMIC 2200P 20% 40V
D102	8-719-107-94	DIODE 1SS202-1
D103	8-719-107-94	DIODE 1SS202-1
D104	8-719-910-64	DIODE HZ6B1L
D105	8-719-107-94	DIODE 1SS202-1
D106	8-719-200-00	DIODE 10E-2
D107	8-719-200-00	DIODE 10E-2
D108	8-719-910-64	DIODE HZ6B1L
D109	8-719-107-94	DIODE 1SS202-1
D110	8-719-200-00	DIODE 10E-2
D111	8-719-200-00	DIODE 10E-2
D112	8-719-107-94	DIODE 1SS202-1

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- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

All resistors are in ohms.

F: nonflammable

COILS

MMH: mH, UH: μH

SEMICONDUCTORS

In each case, U: μ, for example:

UA....: μA..., UPA....: μPA..., UPC....: μPC,

UPD....: μPD...

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D113	8-719-107-94	DIODE 1SS202-1
D114	8-719-107-94	DIODE 1SS202-1
D115	8-719-107-94	DIODE 1SS202-1
D116	8-719-107-94	DIODE 1SS202-1
D117	8-719-107-94	DIODE 1SS202-1
D201	8-719-107-94	DIODE 1SS202-1
D202	8-719-107-94	DIODE 1SS202-1
D203	8-719-107-94	DIODE 1SS202-1
D204	8-719-107-94	DIODE 1SS202-1
D205	8-719-107-94	DIODE 1SS202-1
D206	8-719-107-94	DIODE 1SS202-1
D207	8-719-107-94	DIODE 1SS202-1
D208	8-719-107-94	DIODE 1SS202-1
D209	8-719-107-94	DIODE 1SS202-1
D210	8-719-107-94	DIODE 1SS202-1
D211	8-719-107-94	DIODE 1SS202-1
D212	8-719-107-94	DIODE 1SS202-1
D213	8-719-107-94	DIODE 1SS202-1
D214	8-719-107-94	DIODE 1SS202-1
D215	8-719-107-94	DIODE 1SS202-1
D216	8-719-107-94	DIODE 1SS202-1
D217	8-719-107-94	DIODE 1SS202-1
D218	8-719-901-43	DIODE HZ4B3
D219	8-719-107-94	DIODE 1SS202-1
D220	8-719-107-94	DIODE 1SS202-1
D221	8-719-107-94	DIODE 1SS202-1
D222	8-719-107-94	DIODE 1SS202-1
D223	8-719-107-94	DIODE 1SS202-1
D224	8-719-107-94	DIODE 1SS202-1
D225	8-719-107-94	DIODE 1SS202-1
D226	8-719-107-94	DIODE 1SS202-1
D227	8-719-107-94	DIODE 1SS202-1
D301	8-719-107-94	DIODE 1SS202-1
D302	8-719-107-94	DIODE 1SS202-1
D303	8-719-107-94	DIODE 1SS202-1
D304	8-719-107-94	DIODE 1SS202-1
D305	8-719-107-94	DIODE 1SS202-1
D306	8-719-107-94	DIODE 1SS202-1
D307	8-719-906-58	DIODE GL-5HD21
D308	8-719-906-58	DIODE GL-5HD21
D309	8-719-906-58	DIODE GL-5HD21
D310	8-719-907-49	DIODE GL-5NG5
D311	8-719-907-49	DIODE GL-5NG5
D312	8-719-906-58	DIODE GL-5HD21
D313	8-719-107-94	DIODE 1SS202-1
D315	8-719-907-50	DIODE GL-7N202

ELECTRICAL PARTS

Ref.No.	Part No.	Description
F901	1-532-570-00	(US,Canadian)...FUSE, GLASS TUBE
F902	1-532-570-00	(US,Canadian)...FUSE, GLASS TUBE
F401	1-532-279-00	(G, AEP)...FUSE, TIME-LAG 0.5A
H101	8-719-800-17	DIODE THS102A
H102	8-719-800-17	DIODE THS102A
H301	8-719-800-17	DIODE THS102A
HMG901	1-543-167-00	HEAD (TURN DETECTION)
IC101	8-759-201-58	IC TC9142P
IC102	8-759-600-02	IC M5218L
IC103	8-759-600-02	IC M5218L
IC104	8-759-600-02	IC M5218L
IC201	8-759-240-69	IC TC4069UBP
IC202	8-759-800-75	IC LM6402H-243
IC203	8-759-600-02	IC M5218L
IC205	8-759-600-02	IC M5218L
IC204	8-759-240-50	IC TC4050BP
IC206	8-759-600-02	IC M5218L
IC207	8-759-174-11	IC UPC741C
IC208	8-759-600-02	IC M5218L
IC209	8-759-600-02	IC M5218L
IC210	8-759-600-02	IC M5218L
IC211	8-759-600-02	IC M5218L
IC212	8-759-600-02	IC M5218L
IC301	8-759-240-01	IC TC4001BP
J301	1-507-813-00	JACK
L401	1-421-340-00	LINE FILTER
L701	1-422-142-00	COIL (HORIZONTAL MFB)
L702	1-422-143-00	COIL (VERTICAL DETECTION)
L703	1-422-144-00	COIL (VERTICAL DRIVING)
M901	1-541-233-00	MOTOR (ARM)
PH301	8-719-907-32	PHOT TRANSISTOR GP-1L04
PH302	8-719-907-32	PHOT TRANSISTOR GP-1L04
PL301	1-518-462-00	LAMP, PILOT
Q101	8-729-900-89	TRANSISTOR DTC144ES
Q102	8-729-201-78	TRANSISTOR 2SD1406
Q103	8-729-201-78	TRANSISTOR 2SD1406
Q104	8-729-245-83	TRANSISTOR 2SC2458
Q105	8-729-245-83	TRANSISTOR 2SC2458
Q106	8-729-900-89	TRANSISTOR DTC144ES
Q107	8-729-204-83	TRANSISORR 2SA1048-GR
Q108	8-729-204-83	TRANSISORR 2SA1048-GR
Q109	8-729-202-02	TRANSISTOR 2SB1015
Q110	8-729-900-89	TRANSISTOR DTC144ES
Q111	8-729-900-80	TRANSISTOR DTC114ES
Q112	8-729-900-61	TRANSISTOR DTA114ES

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CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

All resistors are in ohms.

F : nonflammable

COILS


MMH : mH, UH : μH


SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

UPD....: μPD....

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q113	8-729-141-43	TRANSISTOR 2SD414
Q114	8-729-173-13	TRANSISTOR 2SB731
Q115	8-729-141-43	TRANSISTOR 2SD414
Q116	8-729-173-13	TRANSISTOR 2SB731
Q117	8-729-900-36	TRANSISTOR DTC124ES
Q118	8-729-900-36	TRANSISTOR DTC124ES
Q201	8-729-204-83	TRANSISTOR 2SA1048-GR
Q202	8-729-900-65	TRANSISTOR DTA144ES
Q203	8-729-900-61	TRANSISTOR DTA114ES
Q204	8-729-900-61	TRANSISTOR DTA114ES
Q205	8-729-900-61	TRANSISTOR DTA114ES
Q206	8-729-900-61	TRANSISTOR DTA114ES
Q207	8-729-900-80	TRANSISTOR DTC114ES
Q208	8-729-900-80	TRANSISTOR DTC114ES
Q209	8-729-195-23	TRANSISTOR 2SA952
Q210	8-729-195-23	TRANSISTOR 2SA952
Q212	8-729-900-80	TRANSISTOR DTC114ES
Q213	8-729-900-61	TRANSISTOR DTA114ES
Q214	8-729-900-36	TRANSISTOR DTC124ES
Q215	8-729-900-74	TRANSISTOR DTC143TS
Q216	8-729-900-74	TRANSISTOR DTC143TS
Q217	8-729-141-43	TRANSISTOR 2SD414
Q218	8-729-173-13	TRANSISTOR 2SB731
Q219	8-729-204-83	TRANSISTOR 2SA1048-GR
Q220	8-729-900-74	TRANSISTOR DTC143TS
Q221	8-729-141-43	TRANSISTOR 2SD414
Q222	8-729-173-13	TRANSISTOR 2SB731
Q224	8-729-900-80	TRANSISTOR DTC114ES
Q225	8-729-900-36	TRANSISTOR DTC124ES
Q226	8-729-900-74	TRANSISTOR DTC143TS
Q227	8-729-141-43	TRANSISTOR 2SD414
Q228	8-729-173-13	TRANSISTOR 2SB731
Q229	8-729-900-74	TRANSISTOR DTC143TS
Q230	8-729-900-74	TRANSISTOR DTC143TS
Q231	8-729-204-83	TRANSISTOR 2SA1048-GR
Q232	8-729-900-74	TRANSISTOR DTC143TS
Q233	8-729-900-80	TRANSISTOR DTC114ES
Q234	8-729-900-80	TRANSISTOR DTC114ES
Q235	8-729-245-83	TRANSISTOR 2SC2458
Q237	8-729-224-61	TRANSISTOR 2SK246
Q238	8-729-900-63	TRANSISTOR DTA124ES
Q239	8-729-900-36	TRANSISTOR DTC124ES
Q240	8-729-900-63	TRANSISTOR DTA124ES
Q241	8-729-900-36	TRANSISTOR DTC124ES
Q301	8-729-101-01	TRANSISTOR PH101
Q302	8-729-101-01	TRANSISTOR PH101

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R101	1-247-859-00	CARBON	15K	5%	1/6W
R102	1-247-807-00	CARBON	100	5%	1/6W
R103	1-247-849-00	CARBON	5.6K	5%	1/6W
R104	1-247-843-00	METAL OXIDE	10	5%	1/6W
R105	1-247-847-00	CARBON	4.7K	5%	1/6W
R106	1-247-847-00	CARBON	4.7K	5%	1/6W
R107	1-247-844-00	CARBON	3.6K	5%	1/6W
R108	1-247-847-00	CARBON	4.7K	5%	1/6W
R109	1-247-847-00	CARBON	4.7K	5%	1/6W
R110	1-247-807-00	CARBON	100	5%	1/6W
R111	1-212-944-00	FUSIBLE	2.7	5%	1/2W
R112	1-212-945-00	FUSIBLE	82	5%	1/2W
R113	1-247-847-00	CARBON	4.7K	5%	1/6W
R114	1-247-847-00	CARBON	4.7K	5%	1/6W
R115	1-247-847-00	CARBON	4.7K	5%	1/6W
R116	1-247-847-00	CARBON	4.7K	5%	1/6W
R117	1-247-807-00	CARBON	100	5%	1/6W
R118	1-247-887-00	CARBON	220K	5%	1/6W
R119	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R120	1-212-944-00	FUSIBLE	2.7	5%	1/2W
R121	1-212-944-00	FUSIBLE	2.7	5%	1/2W
R122	1-247-895-00	CARBON	470K	5%	1/6W
R123	1-247-887-00	CARBON	220K	5%	1/6W
R124	1-247-855-00	CARBON	10K	5%	1/6W
R125	1-247-863-00	CARBON	22K	5%	1/6W
R126	1-247-874-00	CARBON	62K	5%	1/6W
R127	1-247-855-00	CARBON	10K	5%	1/6W
R128	1-247-855-00	CARBON	10K	5%	1/6W
R129	1-247-852-00	CARBON	7.5K	5%	1/6W
R130	1-247-857-00	CARBON	12K	5%	1/6W
R131	1-247-815-00	CARBON	220	5%	1/6W
R132	1-247-831-00	CARBON	1K	5%	1/6W
R133	1-247-831-00	CARBON	1K	5%	1/6W
R134	1-247-891-00	CARBON	330K	5%	1/6W
R135	1-247-815-00	CARBON	220	5%	1/6W
R136	1-247-831-00	CARBON	1K	5%	1/6W
R137	1-247-831-00	CARBON	1K	5%	1/6W
R138	1-247-891-00	CARBON	330K	5%	1/6W
R139	1-247-815-00	CARBON	220	5%	1/6W
R140	1-247-893-00	CARBON	390K	5%	1/6W
R141	1-247-815-00	CARBON	220	5%	1/6W
R142	1-247-893-00	CARBON	390K	5%	1/6W
R143	1-247-855-00	CARBON	10K	5%	1/6W
R144	1-247-855-00	CARBON	10K	5%	1/6W
R145	1-247-876-00	CARBON	75K	5%	1/6W

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COILS

MMH: mH, UH: μH

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PS-X555ES

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R146	1-247-879-00	CARBON	100K	5%	1/6W
R147	1-247-843-00	CARBON	3.3K	5%	1/6W
R148	1-247-857-00	CARBON	12K	5%	1/6W
R149	1-247-844-00	CARBON	3.6K	5%	1/6W
R150	1-247-855-00	CARBON	10K	5%	1/6W
R201	1-247-855-00	CARBON	10K	5%	1/6W
R202	1-247-855-00	CARBON	10K	5%	1/6W
R203	1-247-855-00	CARBON	10K	5%	1/6W
R204	1-247-891-00	CARBON	330K	5%	1/6W
R205	1-247-891-00	CARBON	330K	5%	1/6W
R206	1-247-867-00	CARBON	33K	5%	1/6W
R207	1-247-867-00	CARBON	33K	5%	1/6W
R208	1-247-863-00	CARBON	22K	5%	1/6W
R209	1-247-863-00	CARBON	22K	5%	1/6W
R210	1-247-855-00	CARBON	10K	5%	1/6W
R211	1-247-903-00	CARBON	1M	5%	1/6W
R212	1-247-848-00	CARBON	5.1K	5%	1/6W
R213	1-247-848-00	CARBON	5.1K	5%	1/6W
R214	1-247-848-00	CARBON	5.1K	5%	1/6W
R215	1-247-848-00	CARBON	5.1K	5%	1/6W
R216	1-247-848-00	CARBON	5.1K	5%	1/6W
R217	1-247-887-00	CARBON	220K	5%	1/6W
R218	1-247-887-00	CARBON	220K	5%	1/6W
R219	1-247-887-00	CARBON	220K	5%	1/6W
R220	1-247-887-00	CARBON	220K	5%	1/6W
R221	1-247-831-00	CARBON	1K	5%	1/6W
R222	1-247-831-00	CARBON	1K	5%	1/6W
R223	1-247-831-00	CARBON	1K	5%	1/6W
R224	1-247-831-00	CARBON	1K	5%	1/6W
R225	1-247-813-00	CARBON	180	5%	1/6W
R226	1-247-813-00	CARBON	180	5%	1/6W
R227	1-247-813-00	CARBON	180	5%	1/6W
R228	1-247-813-00	CARBON	180	5%	1/6W
R229	1-247-813-00	CARBON	180	5%	1/6W
R230	1-247-813-00	CARBON	180	5%	1/6W
R231	1-247-813-00	CARBON	180	5%	1/6W
R232	1-247-817-00	CARBON	270	5%	1/6W
R233	1-247-798-00	CARBON	43	5%	1/6W
R234	1-247-817-00	CARBON	270	5%	1/6W
R235	1-247-817-00	CARBON	270	5%	1/6W
R237	1-247-855-00	CARBON	10K	5%	1/6W
R238	1-247-861-00	CARBON	18K	5%	1/6W
R239	1-247-855-00	CARBON	10K	5%	1/6W
R240	1-247-855-00	CARBON	10K	5%	1/6W
R241	1-247-843-00	CARBON	3.3K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R242	1-247-838-00	CARBON	2K	5%	1/6W
R243	1-247-903-00	CARBON	1M	5%	1/6W
R244	1-247-823-00	CARBON	470	5%	1/6W
R245	1-247-879-00	CARBON	100K	5%	1/6W
R246	1-247-823-00	CARBON	470	5%	1/6W
R247	1-247-879-00	CARBON	100K	5%	1/6W
R248	1-247-886-00	CARBON	200K	5%	1/6W
R249	1-247-886-00	CARBON	200K	5%	1/6W
R250	1-247-886-00	CARBON	200K	5%	1/6W
R251	1-247-886-00	CARBON	200K	5%	1/6W
R252	1-247-886-00	CARBON	200K	5%	1/6W
R253	1-247-879-00	CARBON	100K	5%	1/6W
R254	1-247-879-00	CARBON	100K	5%	1/6W
R255	1-247-879-00	CARBON	100K	5%	1/6W
R256	1-247-879-00	CARBON	100K	5%	1/6W
R257	1-247-886-00	CARBON	200K	5%	1/6W
R258	1-247-855-00	CARBON	10K	5%	1/6W
R259	1-247-855-00	CARBON	10K	5%	1/6W
R260	1-247-855-00	CARBON	10K	5%	1/6W
R261	1-247-855-00	CARBON	10K	5%	1/6W
R262	1-247-865-00	CARBON	27K	5%	1/6W
R263	1-247-903-00	CARBON	1M	5%	1/6W
R264	1-247-892-00	CARBON	360K	5%	1/6W
R265	1-247-851-00	CARBON	6.8K	5%	1/6W
R266	1-247-851-00	CARBON	6.8K	5%	1/6W
R267	1-247-892-00	CARBON	360K	5%	1/6W
R268	1-247-855-00	CARBON	10K	5%	1/6W
R269	1-247-815-00	CARBON	220	5%	1/6W
R270	1-247-855-00	CARBON	10K	5%	1/6W
R271	1-247-831-00	CARBON	1K	5%	1/6W
R272	1-247-863-00	CARBON	22K	5%	1/6W
R273	1-247-855-00	CARBON	10K	5%	1/6W
R274	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R275	1-247-815-00	CARBON	220	5%	1/6W
R276	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R277	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R278	1-247-843-00	CARBON	3.3K	5%	1/6W
R279	1-247-863-00	CARBON	22K	5%	1/6W
R280	1-247-863-00	CARBON	22K	5%	1/6W
R281	1-247-835-00	CARBON	1.5K	5%	1/6W
R282	1-247-889-00	CARBON	270K	5%	1/6W
R283	1-247-855-00	CARBON	10K	5%	1/6W
R284	1-247-887-00	CARBON	220K	5%	1/6W
R285	1-247-877-00	CARBON	82K	5%	1/6W
R286	1-247-823-00	CARBON	470	5%	1/6W

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA...: μA..., UPA...: μPA..., UPC...: μPC,
UPD...: μPD...

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R287	1-247-839-00	CARBON	2.2K	5%	1/6W
R288	1-247-847-00	CARBON	4.7K	5%	1/6W
R289	1-247-847-00	CARBON	4.7K	5%	1/6W
R290	1-247-879-00	CARBON	100K	5%	1/6W
R291	1-247-879-00	CARBON	100K	5%	1/6W
R292	1-247-843-00	CARBON	3.3K	5%	1/6W
R293	1-247-879-00	CARBON	100K	5%	1/6W
R294	1-247-855-00	CARBON	10K	5%	1/6W
R295	1-247-855-00	CARBON	10K	5%	1/6W
R296	1-247-855-00	CARBON	10K	5%	1/6W
R297	1-247-883-00	CARBON	150K	5%	1/6W
R298	1-247-843-00	CARBON	3.3K	5%	1/6W
R299	1-247-888-00	CARBON	270K	5%	1/6W
R301	1-247-841-00	CARBON	2.7K	5%	1/6W
R302	1-247-841-00	CARBON	2.7K	5%	1/6W
R303	1-247-817-00	CARBON	270	5%	1/6W
R401	1-247-855-00	CARBON	10K	5%	1/6W
R402	1-247-855-00	CARBON	10K	5%	1/6W
R403	1-247-895-00	CARBON	470K	5%	1/6W
R404	1-247-893-00	CARBON	390K	5%	1/6W
R405	1-247-895-00	CARBON	470K	5%	1/6W
R406	1-247-893-00	CARBON	390K	5%	1/6W
R407	1-247-815-00	CARBON	220	5%	1/6W
R408	1-247-890-00	CARBON	300K	5%	1/6W
R409	1-247-847-00	CARBON	4.7K	5%	1/6W
R410	1-247-847-00	CARBON	4.7K	5%	1/6W
R411	1-247-855-00	CARBON	10K	5%	1/6W
R412	1-247-879-00	CARBON	100K	5%	1/6W
R413	1-247-831-00	CARBON	1K	5%	1/6W
R414	1-247-834-00	CARBON	1.3K	5%	1/6W
R415	1-247-879-00	CARBON	100K	5%	1/6W
R417	1-247-815-00	CARBON	220	5%	1/6W
R418	1-247-851-00	CARBON	6.8K	5%	1/6W
R419	1-247-899-00	CARBON	680K	5%	1/6W
R420	1-247-899-00	CARBON	680K	5%	1/6W
R421	1-247-851-00	CARBON	6.8K	5%	1/6W
R422	1-247-855-00	CARBON	10K	5%	1/6W
R423	1-247-863-00	CARBON	22K	5%	1/6W
R424	1-247-863-00	CARBON	22K	5%	1/6W
R425	1-247-889-00	CARBON	270K	5%	1/6W
R426	1-247-879-00	CARBON	100K	5%	1/6W
R427	1-247-850-00	CARBON	6.2K	5%	1/6W
R428	1-247-881-00	CARBON	120K	5%	1/6W
R429	1-247-831-00	CARBON	1K	5%	1/6W
R430	1-247-863-00	CARBON	22K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R431	A.1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R432	A.1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R433	1-247-815-00	CARBON	220	5%	1/6W
R434	1-247-851-00	CARBON	6.8K	5%	1/6W
R435	A.1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R436	1-247-855-00	CARBON	10K	5%	1/6W
R437	1-247-900-00	CARBON	750K	5%	1/6W
R438	1-247-883-00	CARBON	150K	5%	1/6W
R439	1-247-871-00	CARBON	47K	5%	1/6W
R440	1-247-887-00	CARBON	220K	5%	1/6W
R441	1-247-879-00	CARBON	100K	5%	1/6W
R442	1-247-867-00	CARBON	33K	5%	1/6W
R443	1-247-857-00	CARBON	12K	5%	1/6W
R444	1-247-867-00	CARBON	33K	5%	1/6W
R445	1-247-867-00	CARBON	33K	5%	1/6W
R446	1-247-867-00	CARBON	33K	5%	1/6W
R447	1-247-861-00	CARBON	18K	5%	1/6W
R448	1-247-879-00	CARBON	100K	5%	1/6W
R449	1-247-863-00	CARBON	22K	5%	1/6W
R450	1-247-886-00	CARBON	200K	5%	1/6W
R451	1-247-885-00	CARBON	180K	5%	1/6W
R453	1-247-831-00	CARBON	10K	5%	1/6W
R454	1-247-855-00	CARBON	10K	5%	1/6W
R455	1-247-855-00	CARBON	10K	5%	1/6W
R456	1-247-807-00	CARBON	100	5%	1/6W
R457	1-247-851-00	CARBON	6.8K	5%	1/6W
R458	A.1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R459	A.1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R460	A.1-213-090-00	FUSIBLE	180	5%	1W F
R461	1-247-879-00	CARBON	100K	5%	1/6W
R462	1-247-855-00	CARBON	10K	5%	1/6W
R463	1-247-831-00	CARBON	1K	5%	1/6W
R464	1-247-855-00	CARBON	10K	5%	1/6W
R465	1-247-839-00	CARBON	2.2K	5%	1/6W
R467	1-247-831-00	CARBON	1K	5%	1/6W
R468	1-247-847-00	CARBON	4.7K	5%	1/6W
R469	1-247-846-00	CARBON	4.3K	5%	1/6W
R470	1-247-867-00	CARBON	33K	5%	1/6W
R471	1-247-846-00	CARBON	4.3K	5%	1/6W
R472	1-247-867-00	CARBON	33K	5%	1/6W
R473	1-247-847-00	CARBON	4.7K	5%	1/6W
R474	1-247-863-00	CARBON	22K	5%	1/6W
R475	1-247-855-00	CARBON	10K	5%	1/6W
R476	1-247-855-00	CARBON	10K	5%	1/6W
R477	1-247-807-00	CARBON	100	5%	1/6W

NOTE:

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- Items marked "A" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ - $\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -XX or Δ - $\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ pF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μ H

SEMICONDUCTORS

In each case, U : μ , for example:

UA...: μ A..., UPA...: μ PA..., UPC...: μ PC,

UPD...: μ PD...

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R478	1-247-807-00	CARBON 100 5% 1/6W
R479	1-247-783-00	CARBON 10 5% 1/6W
R481	1-247-815-00	CARBON 220 5% 1/6W
R482	1-247-815-00	CARBON 220 5% 1/6W
RV101	1-226-235-00	RES, ADJ, CARBON 5K
RV102	1-226-235-00	RES, ADJ, CARBON 5K
RV103	1-226-239-00	RES, ADJ, CARBON 100K
RV104	1-226-239-00	RES, ADJ, CARBON 100K
RV201	1-230-135-00	RES, ADJ, METAL GLAZE 10K
RV202	1-230-135-00	RES, ADJ, METAL GLAZE 10K
RV203	1-230-135-00	RES, ADJ, METAL GLAZE 10K
RV204	1-230-135-00	RES, ADJ, METAL GLAZE 10K
RV205	1-224-661-00	RES, ADJ, METAL GLAZE 50K
RV301	1-230-201-00	RES, VAR, CARBON 10K-B (STYLUS FORCE)
RY301	1-515-519-00	RELAY
S301	1-553-856-00	SWITCH, KEY BOARD (SPEED 33/45)
S302	1-553-856-00	SWITCH, KEY BOARD (REPEAT)
S303	1-553-856-00	SWITCH, KEY BOARD (ARM LIFTER)
S304	1-553-856-00	SWITCH, KEY BOARD (ARM TRANSPORT TO RIGHT)
S305	1-553-856-00	SWITCH, KEY BOARD (ARM TRANSPORT TO LEFT)
S306	1-553-856-00	SWITCH, KEY BOARD (START/STOP)
S307	1-553-856-00	SWITCH, KEY BOARD (BALANCE)
S901	1-553-331-21	SWITCH, PUSH (POWER)
X101	1-527-380-21	CRYSTAL, OSC
X201	1-527-895-00	OSCILLATOR, CERAMIC

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- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA...: μA..., UPA...: μPA..., UPC...: μPC,

UPD...: μPD...

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

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Sony Corporation